

ОТО RHINO LARINGOLOGY

International bulletin

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The *Bulgarian Journal Steno* published original papers, editorials, short rapid communications, case reports and reviews concerned with aspects of general interest of the scientific basis, clinical features, and therapeutic approach of diseases. The journal is published quarterly and papers are accepted for publication both in English and Bulgarian languages. Manuscripts containing original material are accepted if neither the article nor any essential part of this has been or will be published or submitted elsewhere before. This restriction does not apply to abstracts or press reports published in connection with scientific meetings.

Submit an original manuscript with one set of original figures and two copies of the complete manuscript. Address all submissions to the Editor / M. Milkov, Journal Steno, street, №, Varna, Bulgaria.

The manuscripts should be on standard-sized A4 paper in double-spaced typewriting on one side of the paper only. Manuscripts must be prepared in accordance with the „Uniform Requirements for Manuscript submitted to Biomedical Journals“. Manuscripts improperly prepared will be returned to the author without review. A separate covering letter signed by the authors must state that the data have not published elsewhere and identify the author to whom the correspondence must be submitted. All original manuscripts will be submitted to reviewers, known personalities in the field.

Manuscript preparation

Arrange manuscript as follows, each component (1-9) beginning on a separate page: (1) title page, (2) abstract, (3) introduction/background, (4) material and methods, (5) results, (6) discussion, (7) references, (8) figure legends, (9) tables.

Place page number and first author's last name at top of each page.

Cite references, figures and tables consecutively as they appear in the text.

(1) Title page

Title should be concise and descriptive. The title page should include the name of the author with initials or distinguishing first name, and the name and address of the hospital or institution where the work was performed.

List grant support and other assistance.

List alphabetically abbreviations used and three to ten keywords.

Provide name, complete address, telephone number and fax number of corresponding author.

Title page should include also a short (fewer than 45 characters) running head.

(2) Abstract

Provide on a separate page an abstract of not more than 250 words, consisting of four paragraphs, labeled: Background, Methods, Results and Conclusions. Do not use abbreviations, footnotes, or references. For original articles, if the paper is published in French, an English abstract should be added to the manuscript, and conversely.

(3) Body of paper

The paper must be conventionally structured in the following chapters: Introduction/

Background, Methods, Results, and Discussions. Each chapter must begin on separate pages. In Materials and Methods, the authors must give sufficient information to permit detailed evaluation and duplication of the work by other investigators. Ethical guidelines followed must be described.

Approval of institutional human research review committees or animal welfare committees should be cited. Outline statistical

methods used. Identify drugs and chemicals used by generic name (if trademarks are mentioned, manufacturer name and city are given).

(4) References

Cite references in order of appearance in text using arabic numerals in parentheses. Cite personal communications and unpublished data directly in text without being numbered. Conform abbreviation to those used in Index Medicus. List of all authors when there are six or fewer; when there are seven or more, list the first three, than et al.

Examples:

Original article

23. Kimura K, Ohto M, Matsutani S, Furuse J, Hoshino K, Okuda K. Relative frequencies of portosystemic pathways and renal shunt formation through the „posterior“ gastric vein: portographic study in 460 patients. *Hepatology* 1990; 12: 725-728

Article in book:

21. Rousselot LM, Burchell AR. Splenic and arterial portography and hemodynamics in portal hypertension. In: Schiff L, ed. *Diseases of the liver*. Philadelphia: JB Lippincott, 1975: 368-423

(5) Tables

Tables must be typed and double-spaced, each on separate sheet. Number according to order of citation. Table number and title must appear above table, explanatory notes below.

(6) Figure legends

Figure legend must be typed and double-spaced. Numbered according to order of citation. Provide enough information to permit the interpretation of figure without reference to text.

(7) Figures/illustrations

Figures should be professionally designed. Submit one set of high-quality glossy photographs in a separate envelope. They will be submitted in actual-size, as they will be printed without enlargement or reduction. Identify each figure with first's author's last name, figure number in Arabic numerals and an arrow indicating the top on the backside on each figure marked with a soft pencil or on a self-adhesive label affixed to the back of each figure. Color illustrations are accepted if they make an exceptional contribution. Authors will be required to subsidize the publication, if have colored figures at a cost of ? BNL per figure.

Case reports will only be accepted if of major merit and interest. Letters related with articles published in *Steno* or with topics of general interest are welcomed.

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Peer-review procedure

The *Steno* promotes evaluation of all the original papers by two or three independent (?) reviewers. The peer-review process is essential for ensuring the quality of the scientific information disseminated. The reviewers are asked to evaluate the manuscript by applying the same standards as for the international journals. The reviewers send their comments to the Editor. The Editor will inform the authors about the suggestions made by the referee and ask them to answer the questions and make the required corrections. The revised manuscript should be sent in no more than two months to the Editor. Revised manuscripts sent later will not be considered.

When the Editor receives the corrected version with all changes marked, accompanied by a letter with a point-by-point reply to the reviewers' comments, he sends those back to the same reviewer, who makes the final recommendation for acceptance or rejection of the manuscript.

The Editorial Team Steno



International Black Sea
Otology and Neurotology
Association



1st Black Sea Symposium of Otology and Neurotology

1-2 September 2017
Varna, Bulgaria

Under the auspices
of Prof. Krasimir Ivanov – Rector,
Medical University „Prof. Dr. P. Stoyanov” – Varna

Honor President J. Magnan. **President of symposium** P. Nedev
President of Black sea otology and neurootology assotiation M. Milkov
Chairmans O. Borisenko, N. Ozgirgin, S. Kosiakov, P. Dimov, O. Celik, T. Shirov. **Secretary** St. Mirchev

Main Topics

Ossicular reconstruction
Otitis acuta media in children
Middle ear prosthesis
New born screening
Cholesteatoma
Retraction pocets
Cochelear Implant
Biomaterials
Biointegration
BPPV-Update & Controversies
The Inner Ear Imaging
Vascular Vertigo
VEMP (Clinical) – Clinical Application of VEMPs
Meniere's Disease (Clinical) – Intratympanic Drug Application
Vestibular Migraine
Head Impulse Test
Gait & Posture
Video Head Impulse Test
Basic Physiology of Vestibular Compensation and Adaptation
Vestibular Rehabilitation
Vestibular Prosthesis
Neurosensory Diagnosis and Prognosis of Mild Traumatic Brain Injury
Genetics for Inner Ear/Vestibular Disorder
Superior Canal Dehiscence Syndrome
Vestibular Brain and Functional Imaging
Spatial Orientation
Meniere's Disease (Basic) – Recent Progress in Revealing Pathologic Mechanism of Meniere's Disease Visually
Induced Dizziness; What Is It; Where Does It Come From; How Can We Deal With It?
Vestibular Disorder and Autonomic Interaction
BPPV-Pathogenesis
Cochlear Implant and Vestibular Function
PathophysiologicMechanism of Functional and Psychiatric Vestibular Disorders
VEMP (Basic) – The Neural Basis of Vestibular Evoked Myogenic Potentials
VEMP and Otolithic Function Tests I
Vestibular Migraine
Epidemiology
Meniere's Disease and Related Disorders I
Diagnosis and treatment of vestibular neuritis
Modern management of Meniere's disease
Intratympanic treatment in dizzy and vertiginous cases
Cerebellar vestibular disorders



Symposium participants

Al-Abri R. (Oman)	Magnan J. (France)
Anastasopoulos G. (Greece)	Marinov G. (Bulgaria)
Bayazit Y. A. (Turkey)	Marnauza D. (Latvia)
Benchev R. (Bulgaria)	Matev L. (Bulgaria)
Bobrov A. (Ukraine)	Milkov M. (Bulgaria)
Bodrova I. V. (Russia)	Mirchev S. (Bulgaria)
Bozhinov P. (Bulgaria)	Mostafa B. E. (Egypt)
Bozhinova P. (Bulgaria)	Neagos A. (Romania)
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Boyadzhieva M. (Bulgaria)	Ozgirgin O. N. (Turkey)
Celik O. (Turkey)	Papp O. V. (Ukraine)
Cirticioiu A. (Romania)	Pavlovic D. (Serbia)
Cömert A. (Turkey)	Pochuieva T. (Ukraine)
Cömert E. (Turkey)	Radeva M. (Bulgaria)
Dazert S. (Germany)	Rahman H. A. (United Arab Emirates)
Dimov P. (Bulgaria)	Rouev P. (Bulgaria)
Domuta M. (Romania)	Shirov T. (Bulgaria)
Erden B. (Turkey)	Skarzynski H. (Poland)
Grupcheva C. (Bulgaria)	Skarzynski P. H. (Poland)
Gültekin E. (Turkey)	Sprinzi G. M. (Austria)
Honnurappa V. (India)	Stankovic M. (Serbia)
Iliev G. (Bulgaria)	Stavrev D. (Bulgaria)
Jeliazkova Z. (Bulgaria)	Stefan A. (Romania)
Kalcioglu M. T. (Turkey)	Tonchev Ts. (Bulgaria)
Kleijnung T. (Switzerland)	Tzvetkova A. (Bulgaria)
Kostadinov Yu. (Bulgaria)	Valkov A. (Bulgaria)
Kostadinova T. (Bulgaria)	Vicheva D. (Bulgaria)
Kosyakov S. I. (Russia)	Vincent R. (France)
Kozhuharov H. (Bulgaria)	Uzun C. (Turkey)
Kumar V. (India)	Zlatanov H. (Bulgaria)
Kutsarov A. (Bulgaria)	

ПРИВЕТСТВИЕ НА РЕКТОРА НА МЕДИЦИНСКИ УНИВЕРСИТЕТ – ВАРНА



Dear symposium participants and guests,

I feel sincerely pleased that here, in the sunny city of Varna, we meet on the occasion of the First International Black Sea Otology and Neuro-otology Symposium, Third Vestibular Days of Varna. It is a honour for me to welcome you! I am extraordinarily happy that today, among us there are more than 120 eminent scientists from 13 countries. During these two days, the city of Varna transforms itself into a capital of otology and neuro-otology, a capital of new and modern ideas, conceptions, and experience.

Within three years only, we have successfully converted the Vestibular Days of Varna into tradition and into necessary location for exchange of knowledge and practical opportunities, and since this year onwards – into place for implementation of an international scientific exchange in the field of otology and neuro-otology at the highest level. Rising interest in this meeting is a proof of

the fact that, from year to year, one approaches the necessity for broader application of innovative methods and for comprehensive analysis of the whole palette of new scientific information in medicine.

The advancement of this forum to such a high level and its recognition as an international project in close collaboration with world eminent researchers represent the consecutive step upwards in the development of the effective management of the patients with otological and neuro-otological diseases.

Let the concrete investigations and results from this scientific forum be your real contribution as professionals to the further development and enrichment of these two sciences – otology and neuro-otology.

I wish you health, faith and optimism. Let you be much as the same tireless on your professional walk of life!

Professor Krasimir Ivanov, MD, PhD, DSc

Rector Medical University „Professor Paraskev Stoyanov“ of Varna



ПРИВЕТСТВИЕ НА КМЕТА НА ОБЩИНА ВАРНА

TO
THE ORGANIZERS AND PARTICIPANTS
IN THE INTERNATIONAL BLACK SEA SYMPOSIUM ON
OTOLOGY AND NEUROTOLOGY

Dear Ladies and Gentlemen,

It is my honor that the city of Varna hosts the First International Black Sea Symposium on Otology and Neurotology, which takes place within the Third Varna Vestibular Days.

We work hard for the establishment of our city as a medical center of the Black Sea region. The opportunities for excellent medical staff training, combined with good specialized treatment, prevention, rehabilitation and balneology conditions reveal a potential that we have the ambition to continue to develop. Among the priorities of Varna Municipality are school health care development and investment in rehabilitation and prevention programs on risky behavior among children and young people.

We are convinced that good health care guarantees a quality of life and therefore it needs support at all levels. The exchange of good practices at international scientific symposiums multiplies the efforts for the development of health-care and unites the potential of leading specialists in response to the big challenges that medicine faces today.

I would like to wish all the participants in the international forum efficient work and great success in their professional sphere. I am glad that the active work of our medical community and the good congress tourism conditions offered by the Sea capital of Bulgaria open up prospects for new scientific partnerships. I really hope that the first edition of the International Black Sea Symposium on Otology and Neurotology will mark the beginning of a series of significant scientific events in the name of the highest value – the life and good health of the people!

IVAN PORTNIH
Mayor of Varna





Dear Colleagues and Friends,

On behalf of the Bulgarian National Society of Otorhinolaryngology, Head and Neck Surgery and myself, I would like to welcome you all to the First International Black Sea Otology and Neuro-otology Symposium in Varna. We are particularly proud of the programme of the Symposium in terms of depth of discussions and the expertise of the faculty with more than 45 international and regional speakers from 12 countries, sharing their experience and skills in the following areas:

- ◆ Endoscopic ear surgery;
- ◆ Chronic otitis media surgery: an update;
- ◆ Current and developing management in restoration of conductive and sensory neural hearing loss;
- ◆ Cochlear implantation and middle ear implants;
- ◆ Vertigo and surgery in vertigo;
- ◆ Surgical treatment of facial palsy, etc.

The idea about the International Black Sea Otology and Neuro-otology Symposium was born 4 years ago in St. Petersburg, where representatives of Russia, Ukraine, Turkey and Bulgaria decided to organize meeting focused on Otology and Neuro-otology. The idea was accepted very well by the Bulgarian National Society of Otorhinolaryngology, Head and Neck Surgery. I would like to thank personally to Assoc. Prof. Mario Milkov, for the great efforts in organizing of this first meeting and Prof. Jacques Magnan for his continued support to the event.

I do believe that we will have a very special meeting in Varna, and I am looking forward to see the results of the symposium and the future development of the idea. I wish great success to the event and I want to assure you that our National Society will support the future activities of the International Black Sea Otology and Neuro-otology Symposium.

Kind Regards: Prof. Rumen Benchev – President of the Bulgarian National Society of ORLHNS.

Скъпи колеги и приятели,

От името на българското Национално сдружение по оториноларингология, хирургия на глава и шия и от мое име искам да ви приветствам с „добре дошли“ на Първия международен черноморски симпозиум по отология и невроотология във Варна. Ние сме особено горди с програмата на симпозиума по отношение на нейната дълбочина на дискусиите и експертни становища на повече от 45 международни и наши лектори от 12 държави, които ще споделят техния опит и умения по следните основни теми:

- ◆ Ендоскопична хирургия на средното ухо;
- ◆ Хирургия на хроничния среден отит – съвременни аспекти;
- ◆ Съвременно лечение на звукопроводното и звукоприемното намаление на слуха;
- ◆ Кохлеарна имплантация и импланти в средното ухо;
- ◆ Световъртеж и хирургично лечение на световъртежа.
- ◆ Хирургично лечение на парализите на лицевия нерв и др.

Идеята за Международен черноморски симпозиум по отология и невроотология се е зародила в Санкт Петербург преди 4 години, когато представители на Русия, Украйна, Турция и България са решили да организират среща, посветена на отология и невроотология. Идеята беше възприета много добре от българското Национално сдружение по оториноларингология, хирургия на глава и шия. Бих искал да благодаря лично на доц. Марио Милков за огромните усилия при организацията на тази първа среща и на проф. Жак Манян за неговата непрекъсната подкрепа на събитието.

Аз вярвам, че срещата във Варна ще бъде много специална и с нетърпение очаквам резултатите от нея и бъдещото развитие на идеята. Пожелавам голям успех на настоящето събитие и искам да ви уверя, че нашето Национално сдружение ще подкрепи и бъдещите прояви на Международния черноморски симпозиум по отология и невроотология.

***Поздрави: проф. Румен Бенчев – Председател на българското
Национално сдружение по оториноларингология, хирургия на глава и шия.***



Dear colleagues, dear friends!

It is a great honour and pleasure for us to welcome you to the First International Black Sea Otology and Neuro-otology Symposium in the superb city of Varna! We are very proud to enjoy the presence and active participation of such world famous otologists and neuro-otologists, indeed. All of them prove to be true friends of us.

The idea of creation of this Association emerged in St. Petersburg four years ago. It was suggested by Prof. Oleg Borysenko and Assoc. Prof. Mario Milkov. Then this idea was embraced by the governing body of the Medical University of Varna and, personally, by Prof. Krasimir Ivanov, Rector of our University. Meanwhile, Prof. Roumen Benchev, Prof. Plamen Nedev, Prof. Pavel Dimov, Prof. Dilyana Vicheva, Assoc. Prof. Georgi Marinov also considered this idea very promising. They were actively involved in the organization and subsequent official registration of the Association. We performed fruitful conversations and discussions with Prof. O. N. Ozgirgin, Prof. Jacques Magnan, Prof. Cem Uzun, Prof. Sergey Kosyakov and numerous colleagues from the countries in the Black Sea region. All of them sincerely supported this idea. In 2015 and 2016, two symposia on vestibulology, the so-called Varna Vestibular days, were successfully held in our city. They were attended by Prof. O. N. Ozgirgin, Prof. Stefan Volkenstein, Prof. Tobias Kleinjung, Prof. Badr E. Mostafa, Prof. Levent N. Özlüoglu and other colleagues.

In our modest opinion, the present meeting will substantially contribute to the uninterrupted advances in the interdisciplinary field of otology and neuro-otology by promoting the popularization of broad-spectrum novelties in the modern diagnosis, individualized management and effective prevention of these diseases of rising socio-medical importance worldwide. We will share our most recent experience and discuss hot-topic concepts facing the challenges of the 21st millennium.

We strongly believe that the fruitful interpersonal communications during and after this symposium will further promote our international interdisciplinary collaboration in the region of Black Sea countries through the regular organization of educational and practical training courses, exchange of specialists, postgraduate studies, joint scientific projects and publications in journals and congress proceedings, etc. Our Black Sea Association of Otology and Neuro-otology (BSAON) will serve as a natural bridge for transfer of knowledge and experience between Europe and Asia under the conditions of scientific globalization in a united world. We shall work as members of the Balkan Society for Otorhinolaryngology and Head and Neck Surgery, the European Association of Otology and Neurootology, and Politzer Society as well.

We cordially wish to all meeting participants, present and future members of our Association, health, happiness, good luck and scientific successes during the noble research and practical clinical activity as otologists and neuro-otologists.

On behalf of the Organizing Committee,

Prof. Plamen Nedev, MD, PhD, DSc, Symposium President

Assoc. Prof. Mario Milkov, MD, PhD, President of BSAON

Greetings from Varna!

Best regards



FIRST INTERNATIONAL BLACK SEA OTOTOLOGY AND NEURO-OTOLOGY SYMPOSIUM

THIRD VESTIBULAR DAYS OF VARNA

Varna, September 1-2, 2017

Cherno More Interhotel

Honorary President: Prof. Jaques Magnan

Symposium president: Prof. Plamen Nedev

President of Black Sea Association of Otolaryngology and Neuro-otology: Assoc. Prof. Mario Milkov

Chairmen: O. Borysenko, O. N. Ozgirgin, O. Çelik, S. I. Kosyakov, P. Dimov, T. Shirov

Secretary: S. Mirchev

Under the auspices of Professor Krasimir Ivanov, MD, PhD, DSc
Rector of the Medical University „Prof. Paraskev Stoyanov“ of Varna

Programme at a glance

Friday, September 1, 2017	
8:00 a.m.-5:00 p.m.	Registration of symposium participants
8:00-10:30 a.m.	First Scientific Session
10:30-10:50 a.m.	Coffee break
10:50 a.m.-0:20 p.m.	Second Scientific Session
0:20 a.m.-1:30 p.m.	Third Scientific Session
1:30-2:30 p.m.	Lunch
2:30-4:30 p.m.	Fourth Scientific Session
4:30-4:50 p.m.	Coffee break
4:50-6:10 p.m.	Fifth Scientific Session
7:00 p.m.	Opening ceremony
8:00 p.m.	Cocktail party
Saturday, September 2, 2017	
8:30-10:30 a.m.	Sixth Scientific Session
10:30-10:50 a.m.	Coffee break
10:50 a.m.-1:10 p.m.	Seventh Scientific Session
1:10-2:00 p.m.	Lunch
2:00-4:30 p.m.	Eight Scientific Session
4:30-4:50 p.m.	Coffee break
4:50-5:10 p.m.	Round table discussion Presence and future of the Black Sea Association of Otolaryngology and Neuro-Otology
5:10-5:30 p.m.	Round table discussion International interdisciplinary collaboration in otology and neuro-otology
5:30 p.m.	Closing ceremony and certificate awarding
7:30 p.m.	Official dinner

Official language: English



PROGRAMME

Friday, September 1, 2017

Hall three

First Scientific Session: *Ancient and modern medical science*

Chairmen: H. Skarzynski, P. Nedev

Secretary: Z. Jeliyakova

8:00 a.m.-5:00 p.m.	Registration of symposium participants	
8:00-8:05 a.m.	P. Nedev, Symposium president – Welcoming speech	
8:05-8:10 a.m.	M. Milkov, President of BSAON – Welcoming speech	
8:10-8:25 a.m.	G. Marinov	About history of medicine in the region of Varna
8:25-8:40 a.m.	P. Dimov	Black Sea Association of Otology and Neuro-Otology – past, presence and future
8:40-8:55 a.m.	C. Uzun	Publication ethics and misconduct cases
8:55-9:10 a.m.	H. Negam	Scanning of the pharaohs
9:10-9:20 a.m.	T. Kostadinova, A. Dokova, M. Milkov, L. Matev, S. Panayotova, S. Smoletsova, S. Dobрева, V. Marinova	The role of international partnerships for knowledge and experience transfer in the field of otology and neuro-otology
9:20-9:30 a.m.	C. Grupcheva	Modern world, modern problems – adapting to life in the digital age
9:30-9:50 a.m.	P. H. Skarzynski, H. Skarżyński	Subjective and objective assessment of patients with new couplers of the Vibrant Soundbridge system
09:50-10:00 a.m.	D. Marnauza, J. Sokolovs, A. Lifšics	A pediatric patient with petrositis: a case report
10:00-10:30 a.m.	<i>Symposium of Actavis, a Company of TEVA: Лечение на вертижните разстройства</i>	
10:30-10:50 a.m.	Coffee break	

Second Scientific Session: *Diagnosis and management of vertigo and tinnitus*

Chairmen: P. Bozhinov, A. Cömert

Secretary: D. Pavlovich

10:50-11:10 a.m.	P. Bozhinov, P. Bozhinova	Dizziness and epileptic seizures
11:10-11:20 a.m.	M. Milkov, T. Kleijung, P. Nedev	Contemporary management of the tinnitus patient in an interdisciplinary setting
11:20-11:40 a.m.	P. Bozhinova, P. Bozhinov	Tinnitus – modern concepts and therapy
11:40-11:50 a.m.	D. Pavlovich	How to differentiate central from peripheral vestibular disorders?
11:50-12:00 a.m.	Yu. Kostadinov, M. Milkov, L. Matev, S. Angelova, H. Navratil, P. Rusev, E. Mutafova	Possibilities for application of social corporate responsibility in pharmaceutical companies offering products in the field of otology and neuro-otology in Bulgaria
12:00 a.m.-0:20 p.m.	<i>Presentation of GlaxoSmithKline firm: Как да преодолеем антибиотичната резистентност при лечение на остър среден отит?</i>	

Third Scientific Session: *Modern ear surgery – Part 1*

Chairmen: O. Borysenko, H. A. Rahman

Secretary: T. Shirov

0:20-0:40 p.m.	A. Cömert, İ. Doğan, E. Cömert, M. C. Kılınc	Three-dimensional evaluation of the semicircular canals, vestibule and cochlea and their surgical neuro-anatomy: a radioanatomical study
0:40-1:00 p.m.	O. Borysenko, I. Srebnyak, A. Bobrov, V. Gudkov	A modified hypoglosso-facial anastomosis: techniques and results
1:00-1:10 p.m.	I. V. Bodrova,	The functional MSCT (fMSCT) of the middle ear mobile structures is a new noninvasive objective diagnostics method
1:10-1:20 p.m.	O. V. Papp, O. M. Borysenko	Functional infralabyrinthine approach to the jugular foramen in type C1-C2 paragangliomas
1:20-1:30 p.m.	T. Shirov, O. Stoyanov, Y. Spiridonov	Superior semicircular canal dehiscence syndrome – modern diagnosis and management
1:30-2:30 p.m.	Lunch	

Fourth Scientific Session: *Hearing loss screening and cochlear implants*

Chairmen: G. M. Sprinzl, Y. A. Bayazit

Secretary: M. Domuta

2:30-2:50 p.m.	G. M. Sprinzl, A. Wolf-Magele, B. Gradl	Active middle ear implants for the rehabilitation of patients with sensineural, mixed and conductive hearing losses – long term experience after 10 years
2:50-3:00 p.m.	Y. A. Bayazit	Cochlear implantation in difficult cases
3:00-3:10 p.m.	A. Stefan, A. Cirticioiu, A. Neagos	How to manage complications after cochlear implantation?
3:10-3:20 p.m.	A. Cirticioiu, A. Stefan, A.-G. Stanciu, I. Csiszer, D. Duca, A. Neagos	Cochlear implant: risks and benefits
3:20-3:40 p.m.	E. M. Domuta	The importance of the neonatal hearing screening
3:40-4:00 p.m.	<i>Presentation of Berlin Chemie firm: Лечение на целогодишния алергичен ринит и неговите усложнения с Беластин</i>	
4:00-4:10 p.m.	M. Milkov, S. Mirchev, A. Valkov, Tz. Lukanov, S. Blazheva, B. Duhlenki	Facial nerve palsy caused by viruses and bacteria affecting the intratemporal course of the facial nerve – case reports. Immunologic aspects
4:10-4:30 p.m.	T. Abadzhiev (<i>Sention, MED EL firm</i>): Why MED-EL?	
4:30-4:50 p.m.	Coffee break	

Fifth Scientific Session: *Ossiculoplasty and tympanoplasty*

Chairmen: C. Uzun, E. Gültekin

Secretary: R. Al-Abri

4:50-5:10 p.m.	C. Uzun	One technique for all kind of perforations: cartilage rod tympanoplasty
5:10-5:20 p.m.	M. Stankovic	Audiological results of the middle ear surgery: open versus closed tympanoplasty
5:20-5:40 p.m.	V. Honnurappa	Piquant situations in ossiculoplasty – How I do it!
5:40-5:50 p.m.	R. Al-Abri	Cartilage rim augmented fascia tympanoplasty (CRAFT): An effective composite graft model over temporalis fascia tympanoplasty
5:50-6:10 p.m.	O. Çelik	Use of cartilage in ear surgery
7:00 p.m.	Opening ceremony	
8:00 p.m.	Cocktail party	



Saturday, September 2, 2017

Hall three

Sixth Scientific Session: *Modern diagnosis and management of otitis media*

Chairmen: S. Dazert, O. Celik

Secretary: P. Rouev

8:30-9:00 a.m.	O. Borysenko, I. Grynko	Eustachian tube function in patients with chronic tubotympanic suppurative otitis media with Eustachian tube dysfunction after tympanoplasty
9:00-9:20 a.m.	<i>Presentation of Nobel Pharma firm: Антибиотичната терапия – рационално ли използваме козове си?</i>	
9:20-9:40 a.m.	O. Çelik	Adhesive otitis media
9:40-9:50 a.m.	T. Pochuieva, O. Merkulov, A. Moroz	Management of acute otitis media with purulent intracranial complications
9:50-10:00 a.m.	A. Kutsarov	Adenoidectomy and otitis media
10:00-10:20 a.m.	<i>P. Nedev Presentation of USB Bulgaria firm: The place of Nootropil in vertigo treatment</i>	
10:20-10:30 a.m.	B. Erden, B. M. Taş, G. Şimşek, E. Cömert, R. Kılıç	Systemic steroid therapy as a single modality in sudden hearing loss
10:30-10:50 a.m.	Coffee break	

Seventh Scientific Session: *Advances in neuro-otology and ophthlmo-otology*

Chairmen: O. N. Ozgirgin, P. Dimov

Secretary: B. E. Mostafa

10:50-11:10 a.m.	O. N. Ozgirgin	Vestibular rehabilitation
11:10-11:30 a.m.	S. Dazert	Endoscopic ear surgery
11:30-11:40 a.m.	A. Bobrov, O. Borysenko, D. Batulin, O. Bodilovskyi, Ye. Karpliuk, O. Panichev, A. Popov, S. Shoferistov	Implantable system for eye blink restoration in an experiment
11:40-12:00 a.m.	<i>Presentation of Mylan firm: Бетасерк – доказана ефективност във вестибуларната патология</i>	
12:00 a.m.-0:20 p.m.	B. E. Mostafa	Petrous bone cholesteatoma Structural damage of the conjunctiva after UV exposure – insights by in vivo confocal microscopy
0:20-0:30 a.m.	P. Rouev, T. Dimitrov	Cochlear implantation in the ossified cochlea
0:30-0:40 p.m.	M. Boyadzhieva, D. Boyadzhiev, M. Marinov, C. Grupcheva	Otalgia treatment with therapeutic contact lenses – where is the catch?
0:40-0:50 p.m.	D. Boyadzhiev, E. Neshkinski, M. Marinov, C. Grupcheva	Sun, UV rays and quality of life of our patients ...
0:50-1:00 p.m.	M. Radeva, D. Grupchev, C. Grupcheva	Structural damage of the conjunctiva after UV exposure – insights by in vivo confocal microscopy
1:00-1:10 p.m.	D. Stavrev	Bulgarian medieval idea of auditory organ structure and its interdependence with the nervous system as expressed in a text by Johan Exarch from the 9 th century
1:10-2:00 p.m.	Lunch Balkan ORL Board Meeting	

Eighth Scientific Session: *Modern ear surgery – Part 2*

Chairmen: J. Magnan, V. Honnurappa

Secretary: V. Kumar

2:00 -2:40 p.m.	J. Magnan	Surgery in vertigo
2:40-3:00 p.m.	V. Kumar	Traumatic facial nerve paralysis – a new innovative technique of transcanal facial nerve decompression
3:00-3:30 p.m.	V. Honnurappa	Temporal bone dissection – approaches to lateral skull base
3:30-3:50 p.m.	M. T. Kalcioglu	Why the newborn hearing screening programs are important?
3:50-4:10 p.m.	E. Cömert, C. Kılıç, A. Cömert	A pediatric patient with petrositis: a case report
4:10-4:30 p.m.	<i>Presentation of Alpen Pharma firm: Продуктите на Немския хомеопатичен съюз – съвременни интегративни подходи в УНГ-практиката</i>	
4:30-4:50 p.m.	Coffee break	
4:50-5:10 p.m.	Round table discussion – Part 1 Perspectives of the Black Sea Society of Otology and Neuro-Otology	
5:10-5:30 p.m.	Round table discussion – Part 2 International interdisciplinary collaboration in otology and neuro-otology	
5:30 p.m.	Closing ceremony and certificate awarding	
7:30 p.m.	Official dinner	



Автобиография

Име: ПЛАМЕН КОСТОВ НЕДЕВ

Телефон: 052/978561

Националност: Българска

Дата на раждане: 28 юли 1959 година

Трудов стаж: 32 години



1985 – 1986 год. от 1986	участков педиатър гр. Добрич асистент в УНГ клиника по УНГ болести към МБАЛ „Св. Марина“ гр. Варна и катедра по неврохирургия и УНГ – ВАРНА
Име и адрес на работодателя	Медицински университет „Проф. д-р П. Стоянов“ – Варна ул. „М. Дринов“ 55 и УМБАЛ „Св. Марина“ гр. Варна ул. „Хр. Смирненски“ 1, Клиника по УНГ болести.
Вид на дейността или сферата на работа	Лечебна, научно-преподавателска и експертна дейност.
2011 г.	Ръководител катедра по Неврохирургия и УНГ болести
2014 г.	Началник Клиника по УНГ болести УМБАЛ „Св. Марина“ – Варна
Образование и обучение	1985 г. – ВМИ гр. Варна
Курсове и специализирано обучение:	
1989 г.	Курс по микроларингохирургия – ВМИ – Пловдив Проф. Дончев
1990 г.	Основен курс по УНГ болести – ВМИ – София Проф. Георгиев
1990 г.	Придобита специалност по УНГ болести
1994 – 1995 г.	Специализация в клиника „Hygea“ – Germany, Prof. C. Betow
1998 г.	Курс Ендоскопска хирургия на околоносните кухини, Тюбинген Prof. Zener
2000 г.	Специализация в Университетска клиника Inselspital Швейцария Prof. Hausler
2000 г.	Implantierbare Hörgeräte. Uniklinik für Hals-Nasen und Ohrenkrankheiten, Universitätsspital Bern. Prof R. Hausler, Dr.sc.techn. M. Kompis
2001 г.	1 st Balkan postgraduate course of Otorhinolaryngologic allergy. Пловдив. Проф. Т. Карчев
2005 г.	Функционална ендоскопска хирургия на околоносните кухини. Ръководител Prof. B.Lippert, Майнц, Германия, Варна
2006 г.	Остеосинтеза на лицевите кости. Ръководител Doc. G. GODBERSEN
2006 г.	Въведение в хирургията на средното ухо. Проф. Dazert St. Bochum. Germany M.florl 2-4
2009 г.	17 th Stuttgart Advanced Course for Functional and Aesthetic Rhinoplasty 2009, 22 – 24 april. Stuttgart, Germany
2012 г.	4 th International Course on Functional. And Aesthetic Surgery of the Nose. Live Surgery. October 14-17, 2012. Imola (Bologna), Italy
2014 г.	European Rhinoplasty Summit – Advanced Rhinoplasty course 2014, 26-28 march, Munich, Germany
Основни дипломи	
Медицина:	№ 000885 от 26.10.1985 г.
Специалност УНГ:	№ 36520 от 01.06.1990 г.
Защитена дисертация на тема:	Хирургично лечение на затрудненото носно дишане, дължащо се на девираща носна преграда
Диплома за научна и образов. степен „доктор“	№ 28791 от 09.01.2004 г. (БАК – София)
Защитена дисертация на тема:	Вътрешен и външен достъп при риносептопластика. Класически и съвременни хирургични техники при лечение на носните деформитети.

Диплома за научна степен „доктор на науките“	26.06.2015 г. – № 109-276 от 09.07.2015 МУ – Варна
Диплома за придобито научно звание „Доцент“	№ 25447 от 06.04.2009 г. 03.01.35. /БАК – София/
Диплома за придобито научно звание „Професор“	№ 0099/20.05.2016 г. 03.01.35. (МУ – Варна)
Членства в научни дружества	БЛС, Д-во по оториноларингология, секретар на Българско ринологично сдружение, Нью Йоркската академия на науките (1992), Берлинско д-во на оториноларинголозите (1994, 1995)

Curriculum vitae

Pavel Dimov



Professor of Otorhinolaryngology, Department of Otorhinolaryngology and Ophthalmology, Medical Faculty, Trakia University Stara Zagora, Bulgaria e-mail: pddimov@abv.bg

1979 – Medical Doctor, Medical Institute Plovdiv, Bulgaria

1983 – Specialty of Otorhinolaryngology

1985 – Assistant Professor of Otorhinolaryngology Depart, Medical Institute Stara Zagora, Bulgaria

1989 – Head Assistant Professor of Otorhinolaryngology Depart, Medical Institute Stara Zagora, Bulgaria

1990 – PhD „On Chronic Otitis Media with Effusion“

1997 – Associate Professor of Otorhinolaryngology

1997 – 2008 Head of Department of Otorhinolaryngology, Ophthalmology and Dermatovenerology, Medical Faculty, Trakia University Stara Zagora, Bulgaria

1997 – 2017 Head Otorhinolaryngology Clinic, University Hospital Stara Zagora, Bulgaria

1999 – 2003 Vice Rector Trakia University Stara Zagora, Bulgaria

2001 – 2004 General Secretary of Balkan Society of Otorhinolaryngology, Head and Neck Surgery

2002 – 2008 Regional Secretary of EAONO for Bulgaria

2008 – MSc „Chronic Otitis Media-Diagnostic, Treatment and Qualification of Oto-Surgeons“

2008 – 2010 Vice Dean Medical Faculty, Trakia University Stara Zagora

18 Memberships in Professional Local and International Organizations

16 Courses and Specialization in France, Germany, Italy, Japan, Greece, Turkey, Serbia

Books:

1997 – Chronic Otitis Media with Effusion

1999 – Proceedings Book 1-st Seminar in Otology and Neuro-Otology

2000 – Proceedings Book 2-nd Seminar in Otology and Neuro-Otology

2001 – Pro Otology Association and Web page Pro Otology

2001 – 2004 Balkan Journals of Otology and Neuro-Otology

2004 – Proceedings Book – Rilski Symposium „Prevention of socially significant diseases“

2014 – 15 Years Continuing Medical Education in Otology, Bulgaria

16 Years' Experience in Continuing Medical Education in Otology and Neuro-Otology

Over 200 papers and 300 presentations in national and international scientific meetings

Languages – English, French, Russian



Curriculum vitae

NAME: TSVETAN LYUBENOV TONCHEV

DATE OF BIRTH: 20/06/1963

CITIZENSHIP: BULGARIAN

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FIELD OF ACTIVITY: DENTAL MEDICINE, MEDICINE, MAXILLOFACIAL SURGERY, ORAL SURGERY, implantology, Oncology, Reconstructive surgery of the head and neck, craniofacial and orbital surgery, functional testing, anthropometric correlations.

TITLE SCIENTIFIC: PROFESSOR.

EDUCATION AND TRAINING, DEGREE:

2016 – medical university of varna, TITLE SCIENTIFIC „PROFESSOR“;

2010 – medical university of varna, TITLE SCIENTIFIC „ASSOCIATE PROFESSOR“;

2008 – MEDICAL UNIVERSITY OF VARNA, EDUCATIONAL QUALIFICATION DEGREE „MASTER“, MASTER IN HEALTH MANAGEMENT;

2006 – MEDICAL UNIVERSITY OF SOFIA, EDUCATIONAL QUALIFICATION DEGREE „PhD“;

1988 – MEDICAL UNIVERSITY OF SOFIA, EDUCATIONAL SCIENTIFIC DEGREE „MASTER“, MASTER IN STOMATOLOGY.



SPECIALIZATIONS AND QUALIFICATIONS:

2014 – medical university of varna, SPECIALTY „DENTAL IMPLANTOLOGY“;

2003 – medical university of SOFIA, SPECIALTY „MAXILLOFACIAL SURGERY“;

1992 – medical university of SOFIA, SPECIALTY „surgical STOMATOLOGY“ (ORAL SURGERY)“.

ADDITIONAL QUALIFICATIONS:

- ♦ CRANIOMAXILLOFACIAL SURGERY;
- ♦ BIMAXILARY and Craniofacial Surgery;
- ♦ microvascular surgery;
- ♦ orthognathic surgery;
- ♦ Oral Implantology.

PROFESSIONAL AFFILIATIONS:

- ♦ PRESIDENT OF „SOCIETY of oral and maxillofacial surgeons in Bulgaria“;
- ♦ VICE PRESIDENT OF BULGARIAN SOCIETY for MEDICAL PHOTOGRAPHY;
- ♦ BULGARIAN DENTAL ASSOCIATION;
- ♦ BAHNO (British Association of Head and Neck Oncologists);
- ♦ IAOMS (International Association of Oral and Maxillofacial Surgeons);
- ♦ COMMISSION ON QUALIFICATION AND ACCREDITATION OF BULGARIAN DENTAL ASSOCIATION;
- ♦ COMMISSION OF MEDICAL STANDARTS OF ORAL AND MAXILLOFACIAL SURGERY;
- ♦ COMMISSION OF Research ethics, MEDICAL UNIVERSITY OF VARNA.

PROJECTS:

2016 – project „Investigation repairs of fillings as part of minimal invasive treatment of the tooth caries“, „Medical science“ fund, Medical University of Varna, Bulgaria;

2014 – project „3D printing and its application in modern methods of treatment in prosthetic dentistry“, Fund for Scientific Investigations, Ministry of Education and Science, Bulgaria;

2011 – project „Evaluation of the effect of application of endooral and endonasal apparats in treatment of patients with habitual snoring and obstructive sleep apnea“, „Medical science“ fund, Medical University of Varna, Bulgaria.

Curriculum vitae



Prof. Stefan Dazert

Stefan Dazert is Professor and Chairman of the Dept. of Otorhinolaryngology & Head and Neck Surgery, Ruhr-University Bochum since 2005. He received his clinical and scientific training at the Depts. of ORL&HNS at the Universities of Würzburg and Essen. In addition, he performed a DFG research fellowship at the University of California San Diego (USA) in the field of inner and middle ear biology.

He has a broad expertise in surgical procedures in the field of ORL&HNS, in particular in middle ear, temporal bone and lateral skull base surgery including infectious diseases and implantable hearing devices. His main research interests include clinical investigations of indication and outcome of implantable hearing systems, as well as research projects to evaluate criteria for auditory neuron survival and neurite extension to potentially improve

cochlear implant efficacy. He presented his work in numerous international meetings and is author of more than 130 articles in national and international journals and book chapters.

Prof. Dazert is the incoming president of the German Society of ORL & HNS, chancellor CME of the German ENT Association and member of the Editorial Board of LaryngoRhinoOtologie.

In 2009, he was a founding member of the Master of Medicine Program in Otorhinolaryngology awarded by the University of Rwanda and continuously supports this project as a lecturer and surgical trainer.

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Curriculum vitae



Доц. д-р Петър Руев

Началник УНГ-отделение към МБАЛ „Тракия“ – Стара Загора. Водещ специалист в областта на оториноларингологията, хирургията на главата и шията и в частност в областта на отологията и кохлеарната имплантация.

Консултант по въвеждане на универсален неонатален слухов скрининг. Специалист по УНГ болести и онкология. Член на борда по УНГ към БЛС. Специализира при редица водещи специалисти в Германия, Австрия, Франция, Белгия, Холандия, Гърция, Турция и САЩ. Занимава се с проблемите на слуха, проявите на световъртеж и промените на гласа. Посещава ежегодно редица форуми в страната и чужбина, на които изнася научни доклади и съобщения.

Доц. д-р Петър Руев, д.м., има над 50 научни труда в наши и чуждестранни специализирани медицински издания.

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Curriculum vitae

Dr Georg M. Sprinzl

Dr Georg M. Sprinzl is Professor of Otolaryngology-Head & Neck Surgery and leads the Implant team of the Department in St. Pölten. He is the Head of the Department of Otolaryngology-Head & Neck Surgery in St. Pölten, Lower Austria. He focuses on stapes surgery, surgery of active middle ear implants and cochlear implantation as well as on neurotologic and oncologic skull base surgery. Sprinzl was trained in skull base surgery by Prof. Werner in Marburg/Germany and was responsible for the cochlea implantation program.

He developed in Innsbruck an ongoing educational program for surgeons with interest in Cochlea implantation and Vibrant Sound Bridge Surgery. Sprinzl is PI of several clinical trials in the field hearing implants. He pays special interest to sound localization and speech perception in bilateral users of Vibrant Sound bridge. Additionally he has established a novel animal cochlea implant model in sheeps together with the Inner Ear Laboratory (Prof. Dr. A. Schrott-Fischer), University of Innsbruck, Austria. His main research interests are on the development of new atraumatic cochlea implant electrodes for the restoration of residual hearing and the development of new bone anchored hearing aids.

Prof. Dr. Sprinzl has published over 85 articles in peer-reviewed journals. He regularly publishes articles in various areas of otolaryngology and head and neck oncology. Due to the development of the educational program in the field of hearing implant surgery he is heavily involved in clinical teaching in many countries.

Starting in January 2014 Professor Sprinzl works part time as a consultant at the hearlife clinic in Dubai, UAE. Since July 2016 he is a visiting professor at the Semmelweis University in Budapest, Hungary.



Curriculum vitae

Prof. Jacques Magnan, France

Prof. Jacques Magnan is the president of Mediterranean Society of Audiology and Otology, and former president of European Academy of Otology and NeuroOtology (EAONO), Politzer Society, Groupe Etude Montagne Otologie and numerous others. He is an exceptionally skilled Neurotologist and one of the most renowned figures in Skull base surgery. He will demonstrate Vestibular nerve section, Neurovascular decompression for Hemifacial spasm, Trigeminal neuralgia and excision of Acoustic neuroma.



Curriculum vitae

Dr. Robert Vincent, France

Dr. Robert Vincent is an internationally well known Otologist at the Causse Ear Clinic in Beziers, Tertierral Referral Center (France) since 1991. He has sub-specialized in Otosclerosis Surgery, Ossicular Reconstruction and Congenital Malformation of the Middle Ear. To his credit he has the largest World Series and experience in surgery for otosclerosis along with various publications to his name. He is also a member of various international otology societies.



Curriculum vitae



Prof. dr hab. n. med. dr h.c. multi Henryk Skarżyński

Prof. dr hab. n. med. dr h.c. multi Henryk Skarżyński światowej sławy otochirurg i specjalista z otorynolaryngologii, audiologii i foniatrii. Od 1994 Specjalista Krajowy a następnie Konsultant Krajowy ds. Audiologii i Foniatrii, od 2011 Konsultant Krajowy ds. Otorhinolaryngologii. Pierwszy w Polsce wszepił implanty: ślimakowe (1992), pniowe (1998), ucha środkowego (2003). W 2002 opracował po raz pierwszy w świecie program leczenia częściowej głuchoty u dorosłych, w 2004 zoperował pierwsze w świecie dziecko. Metoda ta uważana za polską specjalność jako „metoda Skarżyńskiego”, do której opracował nową elektrodę i procedurę kliniczną, została wdrożona w 9 światowych ośrodkach. Ponadto wprowadził ponad sto nowych rozwiązań klinicznych co przyczyniło się do rozwoju dziedziny implantów słuchowych, otocirurgii i audiologii w Polsce i na świecie. Inicjator i organizator drugiego w Europie ośrodka „Cochlear Center” – 1993, resortowego Instytutu Fizjologii i Patologii Słuchu – 1996, Międzynarodowego Centrum Słuchu i Mowy – 2003. Dzięki 2 dekadom Jego działań Polska znajduje się w światowej czołówce krajów, które realizują badania przesiewowe słuchu u dzieci.

Autor i współautor ponad 2500 krajowych i zagranicznych doniesień naukowych. Prowadzi rozległą działalność edukacyjną dla studentów i lekarzy z kraju i z zagranicy.

Profesor Honorowy Uniwersytetu w Provo, USA (1998), doctor honoris causa Akademii Pedagogiki Specjalnej (2011), Uniwersytetu Warszawskiego (2012), Uniwersytetu Marii Curie-Skłodowskiej (2014). Członek najważniejszych krajowych i zagranicznych towarzystw naukowych -Przewodniczący Komitetu Nauk Klinicznych PAN, honorowy członek polskiego i słowackiego towarzystwa otolaryngologów, pierwszy w historii pochodzący z Polski członek amerykańskiego towarzystwa otologów American Otological Society oraz neurootologów – American Neurotology Society, członek CORLAS, POLITZER, ISA, IAO, EAONO i EFAS. Laureat nagród państwowych – Premiera, Ministrów Zdrowia, Nauki i Spraw Zagranicznych, środowiska medycznego oraz wielu prestiżowych nagród krajowych i zagranicznych. Odznaczony przez Prezydenta RP Krzyżem Kawalerskim, Oficerskim i Komandorskim OOP oraz państwowymi odznaczeniami przyznanymi przez Króla Belgii, Prezydenta Gruzji i Ukrainy. Honorowy Obywatel Warszawy, a także Miasta i Gminy Czyżew. W 25-tą rocznicę uzyskania przez Polskę wolności otrzymał tytuł Człowieka Wolności.

Zainicjował i koordynował program „Wyrównywania szans dzieci z zaburzeniami komunikacyjnymi w krajach europejskich” – zagadnienia włączonego do priorytetu prezydencji Polski w UE. Główny inicjator przyjęcia w 2011 Europejskiego Konsensusu Naukowego w tym zakresie – podpisanego przez liderów europejskich środowisk audiologów, foniatrów, terapeutów mowy i okulistów. Zwieńczeniem działań było przyjęcie w 2011 Konkluzji Rady UE na temat. „Wczesnego wykrywania i leczenia zaburzeń komunikacyjnych u dzieci, z uwzględnieniem zastosowania narzędzi e-zdrowia i innowacyjnych rozwiązań”. Największym osiągnięciem w działalności naukowej, klinicznej i dydaktycznej było przygotowanie koncepcji, wybudowanie i uruchomienie Światowego Centrum Słuchu w maju 2012.



Curriculum vitae

Ass. Prof. Piotr Henryk Skarżyński

Ass. Prof. Piotr Henryk Skarżyński got MD in Medical University of Warsaw in 2008, MSc in Department of Management of University of Warsaw (finished in 2010), PhD in 2012 and Ass. Prof. in 2015, both in Medical University of Warsaw.

He realizes scientific, clinical and surgical work in World Hearing Centre of Institute of Physiology and Pathology

of Hearing as a resident, Medical University of Warsaw as an Assistant and Academic teacher, and Institute of Sensory Organs as a Director of Science and Development.

He is an active member of many scientific societies, including the position of Vice Chairman Junior European Rhinology Society from 2010, Member of Board from 2014, Member of Congress and Meeting Committee of European

Academy of Otology and Neuro-Otology from 2014. He is also a Representative Board Member of the International Society for Telemedicine and eHealth from January 2016.

He is an active participant of many national and international conferences with over 795 presentations, 34 round tables, and an instructor on 25 international courses. Author and co-author of 227 scientific publications in specialist national and international journals – Impact Factor 72,439, Index Copernicus 604,90, Ministry of Polish Science and Higher Education points 1685. He is a reviewer in 7 international scientific journal and one national journal in the field of otorhinolaryngology.

He executes numerous national and international projects connected with telemedicine, e-health, including teleconsultations, telerehabilitation and telefitting in the numerous European, Asian and African countries. It is noteworthy that hearing screening and teleconsultations, performed in Bishkek and Dushanbe, were the first telemedical objective measures of hearing in Kirgizstan and Tajikistan accordingly.

Furthermore, Ass. Prof. Piotr H. Skarzynski MD PhD MSc made every effort to organise and perform teleconsultations in African countries. Therefore, hearing screening and numerous teleconsultations were performed in Senegal (March 2014), Ivory Coast (March 2014), Rwanda and Tanzania (both in 2015). He also entered negotiations with African research units about the international collaboration, including an implementation and development of teleconsultations, telerehabilitation and telefitting in Africa. The topics of possibility of scientific exchange between two countries and organization of next hearing screening programs were also discussed.

Ass. Prof. Piotr H. Skarzynski MD PhD MSc coordinates and manages the multifaceted telefitting procedures on the frame of International Centre of Hearing and Speech Medincus, collaborating with agencies in Poland and abroad: in Kajetany, Warsaw, Szczecin, Gdansk, Olsztyn, Opole, Rzeszow, Katowice, Radom, Krakow Odessa (Ukraine) and Bishkek (Kyrgyzstan).

He is also a member of researching and working group of Nationwide Network of Teleaudiology. He takes different activities to improve and develop telemedicine in the country (20 Polish cities) and in the world, including one centre in Ukraine.

He also tries to improve the teleaudiology net between World Hearing Centre in Poland and Asian, European and African centres.



Curriculum vitae



Professor Christina N Grupcheva MD, PhD, DSc, FEBO, FICO (Hon) FBCLA

Prof CN Grupcheva graduated as a medical doctor at Medical University of Varna, and following specialized training became a specialist in ophthalmology in 1996. She continued her studies with short fellowships at Moorfields Eye Hospital, London and Dundee University, UK. In 2000 she relocated to New Zealand as a Senior Research Fellow at Auckland University and Corneal Fellow at Auckland State Hospital for three years. During that period she completed a PhD with high commendations and Best Doctorial Thesis Prize of Auckland University for 2002. On return to Varna she was appointed as Associated Director of Specialized Eye Hospital Varna and shortly after as Associated Professor at Medical University of Varna. In 2007 she was invited to complete a DSc and in 2010 was elected a full National Professor in Ophthalmology. Currently, she is the Head of „Department of Ophthalmology and Visual Science“. Recently she took a second mandate as a Vice Rector at Medical University, Varna, and her main priorities are innovations and translation medicine.

Prof Grupcheva's clinical and research interests and expertise are related to cornea, anterior segment, tear film, in vivo confocal microscopy, contact lenses and complex anterior segment surgery. She has published more than 140 scientific papers and 14 ophthalmology books. She has an impact factor over 60 and more than 2000 citations over the last 15 years. She actively participates as editor in American Academy of Ophthalmology textbooks revision and is reviewer for several prestigious journals. Professor Grupcheva teaches at all graduate and postgraduate levels and currently supervises 7 PhD students and 12 residents in ophthalmology. She has many high commendations graduates at different levels. She regularly presents at national and international meetings on subjects of her expertise, mainly as an invited lecturer. She is a member of number of Bulgarian, European and International learned societies. She is a faculty of Vision Care Academy since 2004. Prof Grupcheva is a representative of Bulgaria in EBO and also currently a President elect of the European Board of Ophthalmology.

Prof Grupcheva's clinical and research interests and expertise are related to cornea, anterior segment, tear film, in vivo confocal microscopy, contact lenses and complex anterior segment surgery. She has published more than 140 scientific papers and 14 ophthalmology books. She has an impact factor over 60 and more than 2000 citations over the last 15 years. She actively participates as editor in American Academy of Ophthalmology textbooks revision and is reviewer for several prestigious journals. Professor Grupcheva teaches at all graduate and postgraduate levels and currently supervises 7 PhD students and 12 residents in ophthalmology. She has many high commendations graduates at different levels. She regularly presents at national and international meetings on subjects of her expertise, mainly as an invited lecturer. She is a member of number of Bulgarian, European and International learned societies. She is a faculty of Vision Care Academy since 2004. Prof Grupcheva is a representative of Bulgaria in EBO and also currently a President elect of the European Board of Ophthalmology.

Curriculum vitae



Dr. Mladena Radeva is an ophthalmology resident at the Medical University of Varna, Bulgaria. In 2015 she graduated from the Medical University of Varna with honors and awards from Varna Municipality and the Bulgarian Medical Association. In 2014 she became „Student of the year of Varna municipality“. She has participated in local, state and international medical conferences and has many scientific publications. Currently she works at „AGPSMP Prof. Dr. Christina Grupcheva“ and Eye Hospital – Varna.



Автобиография

Доц. Д-р Пламен Божинов, д.м., д.м.н., е специалист по неврология и неврофизиология, ръководител на катедра „Неврология и неврохирургия“ на Медицински университет – Плевен. Научните му интереси са в областта на епилептологията, клиничната неврофизиология и транскраниалната магнитна стимулация. Автор е на дисертационен труд за присъждане на образователната и научна степен «Доктор» на тема: Комплексна клинично – неврофизиологична оценка на пациенти с окципитални епилептични пристъпи (Плевен, 2000 г.) и дисертационен труд за присъждане на научната степен «Доктор на науките» на тема: Епилепсия и бременност – възможности за оптимизиране на клиничното поведение (Плевен, 2014 г.) Автор е на книгите „Епилепсия и репродуктивно здраве“ (2004), „Епилепсията – свещената болест“ (2005), „Антиепилептични медикаменти – практическо ръководство“ (2008), „Световъртежът в клиничната практика“ (2008), „Нормално развитие и някои отклонения в нервно-психичното развитие в детската възраст“ (2015), „Епилепсия, бременност и развитие на детето“ (2016), „Черепно-мозъчна травма – диагноза, лечение, прогноза и правни аспекти“ (2016), „Кратък наръчник за провеждане на практическо обучение по клинична електроенцефалография“ (2017).



Автобиография

Д-р Поля Петрова Божинова е родена в град Троян. Завършва медицина в Медицински университет – Плевен през 1996 година. Д-р Божинова е специалист по оториноларингология с професионална квалификация по аудиология и отоневрология. Работи в Медицински център „Галилео“, град Плевен, специализиран в диагностика и лечение на неврологични и УНГ заболявания. Научните ѝ интереси са в областта на детската аудиология, отоневрологията и професионалното слухопротезиране. Съавтор е на книгата „Световъртежът в клиничната практика“ (2008 г.) и „Нормално развитие и някои отклонения в нервно-психичното развитие в детската възраст“ (2015 г.).



Автобиография

Д-р Мария Бояджиева

Завършва медицина в Медицински университет „Проф. д-р Параскев Стоянов“ – Варна, випуск 2009 г. Специализант по офталмология в Катедрата по очни болести и зрителни науки към Медицински университет „Проф. д-р Параскев Стоянов“ – Варна.



Автобиография



Проф. д-р Румен Йорданов Бенчев, д.м.н.

Роден на 20.06.1955 г. в гр. Бургас

Образование: Начално: 1962 – 1974 г. Бургас

Средно: 1969 – 1974 г. Английска езикова гимназия „Гео Милев“ – Бургас

Висше: 1976 – 1982 г. Медицинска академия – София – медицина.

Специалности: 1986 г. – оториноларингология

Военна служба: 1974 – 1976 г.

Месторабота: 1982 – 1983 г. началник СЗС – Каблешково

1983 – 1993 г. научен сътрудник в Научен институт по ушни, носни и гърлени болести, МА – София

1993 – 1999 г. ординатор в УНГ-клиника, I ОРБ – София

От 1999 г. доцент, началник УНГ-клиника – Медицински институт на МВР.

От 2000 г. зам.-директор на Медицински институт на МВР.

От 2007 г. Професор, началник УНГ-клиника – Медицински институт на МВР.

От 2010 г. Изпълнителен директор на Хил-клиник – София

Преподавателски стаж:

1983 – 1999 г. – упражнения със студенти медици и стоматолози; специализанти

От 1999 г. – обучение на специализанти по отоларингология

Научен ръководител на три дисертационни труда.

Публикации и участия в научни форуми:

1. Дисертационен труд: Ларингеални и ларинготрахеални стенози. Проблеми и възможности за лечение – 1995 г.
2. Дисертационен труд: Дисфункция на носната клапа – причини, диагностика и възможности за хирургично лечение – 2006 г.
3. Над 150 научни публикации в наши и чужди списания.

Основни области на научен интерес

Ларингология: онкологична хирургия на ларинкса; стенози на ларинкса, ларингеални парализи.

Ринология: функционална корективна хирургия на носа и синусите; алергичен ринит, алергични заболявания на горните дихателни пътища; онкологични заболявания на носа и околоносните кухини; функционално изследване на носа в норма и патология.

Специализации и курсове в чужбина

Специализации

1. Специализация в клиника по УНГ-болести Утрехт, Холандия – 1994 г.
 2. Специализация в клиника по УНГ-болести Грац, Австрия – 2003 г.
 3. Специализация в клиника по УНГ-болести Бохум, Германия – 2005 г.
- Международни курсове – 26

Други курсове

1. Здравен мениджмънт. ВМА София, 04.03 – 19.04.2002 г.

4. **Хабилитация** – доцент. – 1999 г., професор – 2007 г.

Членство: Български лекарски съюз; Българско национално сдружение по оториноларингология, хирургия на глава и шия – председател; Българско сдружение по ринология – зам.-председател; Българско сдружение по сънна апнея – зам.-председател, Софийско сдружение по оториноларингология – председател; Българско дружество по алергология; Българска академия по медицина; Българска асоциация по клинични проучвания; Европейско дружество по ринология.

Чужди езици: Английски, немски, руски – писмено и говоримо.



Curriculum vitae

Prof. Todorka Kostadinova, PhD

Todorka Kostadinova is a Professor at the Department of Economics and Healthcare Management at the Faculty of Public Health at Medical University „Prof. Dr. Paraskev Stoyanov“ – Varna. She has a PhD degree in economics from the University of National and World Economy in Sofia. She is a guest lecturer in master's programmes in healthcare management at the University of Bern (Switzerland), the Medical University of Vienna, the State University of Burgas, the Technical University of Varna. Kostadinova represents Bulgaria in HOPE – European Hospital and Healthcare Federation (Brussels). Her main scientific interests and publications are in the field of strategic management, social and health marketing, integrated care, change and risk management, management of international projects and programmes, team building, social entrepreneurship and innovations.

She has participated in over 180 projects as a researcher, coordinator and manager. From 2013 to June 2016 Prof. Kostadinova was a Teamleader of Workpackage „Sustainability“ within The European Project „Joint Action on Health Workforce Planning and Forecasting“ financed by the European Commission. She is a leading lecturer in strategic management and health projects at the Medical University of Varna. Through the years Prof. Kostadinova combines academic work with managerial positions at national and international level as a Deputy Minister of Health, member of the Supervisory Board of the National Health Insurance Fund, Coordinator for Bulgaria of the South-Eastern Europe Health Network (SEEHN). At present she is a Vice Rector for International Relations, Accreditation and Quality at the Medical University of Varna.



Curriculum vitae

Daiga Marnauza

Rīga, Latvia

Medical Student in Rīga Stradiņš University (2012-2018)

Education:

Rīga Stradiņš University, Faculty of Medicine

Institut français de Lettonie

Professional experience:

President of Latvian Medical Student's Association (2016-2017)

Lecturer at Rīga Stradiņš University (2017 – present)

Medical advisor at Anatomy Next (2017 – present)

Volunteer doctor's assistant in ENT department, Pauls Stradiņš Clinical University Hospital

Languages: Latvian, Russian, English, French



Curriculum Vitae



Onur Çelik, M.D., M.Sc.

Professor of Otorhinolaryngology – Head & Neck Surgery

BRIEF

Onur Çelik is a Professor and Head of The Department of Otorhinolaryngology – Head & Neck Surgery at Celal Bayar University, Turkey. He is a clinical specialist in ORL-HNS and has a long-term scientific interest in otology, neuro-otology, audiology and allergy. Dr. Çelik is involved in many clinical studies evaluating electrophysiology in ear pathologies, tinnitus, vertigo, and nasal allergy in recent. He has principally supervised 8 PhD students to a doctoral thesis. He has published about 150 scientific papers, and is often invited as a speaker at national and sometimes international meetings.

ADDRESS

University: Manisa Celal Bayar Üniversitesi Hastanesi, Yeni Bina, Kulak Burun Boğaz Hastalıkları Kliniği,

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Phone: + 90. 236. 444 42 28 (Int: 2724)

GSM: + 90. 532. 705 60 60

E-mail: onurcelik@yahoo.com, prof.dr.onurcelik@gmail.com

Department web: www.cbukbb.com

Personal web: www.onurcelik.com

EDUCATION

2011	M.SC. IN AUDIOLOGY	Dokuz Eylül University
1988 – 1992	SPECIALIST IN ORL-HNS	Firat University
1976 – 1982	M.D.	Istanbul University (Cerrahpaşa Medical Faculty)

WORK EXPERIENCE

2001 – Today	Professor in Department of Otorhinolaryngology, Medical Faculty, Celal Bayar University
1998 – 2001	Associate Professor in Department of Otorhinolaryngology, Medical Faculty, Celal Bayar University
1996 – 1998	Associate Professor in Department of Otorhinolaryngology, Medical Faculty, Firat University
1993 – 1996	Assistant Professor in Department of Otorhinolaryngology, Medical Faculty, Firat University
1992 – 1993	ENT Surgeon in Salihli State Hospital
1987 – 1992	Research Assistant in the Department of Otorhinolaryngology, Medical Faculty, Firat University
1982 – 1987	General Practitioner in State Health Centers

WORK EXPERIENCE IN PROFESSIONAL ORGANIZATIONS

- Chairman of the Department of ORL – HNS in Celal Bayar University	2014 – Present
- Adviser on Cholesteatoma, Otology School of the Turkish ORL-HNS Soc	2012 – 2014
- Member of Executive Committee of the Turkish ORL-HNS Society	2012 – Present
- Examiner, EBE/ORL-HNS	2011 – Present
- Chairman of the Department of ORL – HNS in Celal Bayar University	2011 – 2011
- Member of Advisory Committee, The Turkish ORL-HNS Society	2010 – 2012
- President of the Turkish Board of ORL-HNS	2010 – 2012
- President of the Izmir Branch of Turkish ORL-HNS Foundation	2010 – 2012

PROFESSIONAL AFFILIATIONS

- Academic Respiratory Society of Turkey
- The Aegean Otorhinolaryngology – Head & Neck Surgery Surgeon's Society
- Audiology, Speech and Voice Specialists' Society
- The Politzer Society
- Turkish Otology & Neurotology Society
- The Mediterranean Society of Otology and Audiology
- Anatomic Research Society
- Turkish Otorhinolaryngology – Head & Neck Surgery Foundation
- Turkish Otorhinolaryngology – Head & Neck Surgery Society
- Turkish Medical Association

Curriculum vitae

Prof. Mahmut Tayyar KALCIOGLU, MD

Prof. Mahmut Tayyar Kalcioğlu is Professor of Otorhinolaryngology, Head and Neck Surgery (ORL&HNS) at Istanbul Medeniyet University School of Medicine, Istanbul, Turkey. He is the Director of the Health Science Institute at the same University.

He is Board Member of the Turkish Society of ORL&HNS, Board Member of the Balkan Society of ORL&HNS, and Board member of the Turkish Society of Skull Base Surgery. He represents Turkey at ORL section of the European Union of Medical Specialists (UEMS-ORL).

Prof. Kalcioğlu is the Editor in Chief of Medeniyet Medical Journal (www.medeniyetmedicaljournal.org). He is also in editorial boards or international advisory boards of some international or national scientific journals.

Prof. Kalcioğlu has more than 133 published scientific articles in the literature and has 21 H-index in Google Academic.



Curriculum vitae

Prof. Dr. Badr Eldin Mostafa, MD, D.U.

Professor and Chairman, department of Otolaryngology, Head and Neck Surgery, Faculty of Medicine Ain-Shams University.

Prof. Mostafa completed his undergraduate and graduate degrees at the Faculty of Medicine Ain-Shams University.

He received his MSc degree in 1985 and his MD degree in 1989. In addition, he acquired an ECFMG in 1982 and in 2009, a DU in clinical research from the Université Victor Segalen, Bordeaux France.

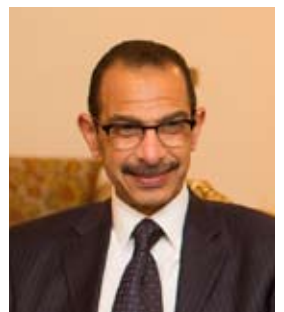
In 2008, Prof. Mostafa received the Ain-Shams University Award for Distinguished Research.

He is member of the IRB of the Faculty of Medicine and member of the National Committee for Professorial Nominations. He is also member of several scientific professional societies including: the CORLAS, European Laryngological Society, Societe Francaise d'ORL-CCF, Politzer Society, Korean ENT-HNS Society, Egyptian ORL society [board member] and Egyptian Skull Base Society board member].

Prof. Mostafa has published over 90 articles in international and national journals in the area of otolaryngology, head and neck surgery and is a reviewer for 10 national and international journals. He coauthored 5 international scientific books.

He was also a speaker at more than 130 international and national congresses and a regular instructor in several national and international training and educational courses.

Current research interests include: Skull base surgery, Head and Neck oncological surgery, laryngo-tracheal stenosis, vestibulogy and cochlear implants.



Curriculum Vitae



Prof. Dr. Hesham Mohamed Ahmed Negm

- Born 23/10/1954 in Giza Egypt, Married, have a son and a daughter.
- Graduated from the Faculty of Medicine, Cairo University.
- M.B.,B.CH. December 1977 signed up Very good with honor From Cairo University.
- M.Sc. (Ear, Nose, and Throat) November 1981 Signed up Excellent From Cairo University.
- M.D. (Ear, Nose, and Throat) May 1984 From Cairo University.
- Chairman of the Otorhinolaryngology department, Faculty of Medicine, Cairo University 2013-2015.
- Professor of Otorhinolaryngology , Faculty of Medicine , Cairo University since 1994.
- Professor in the National Institute of Laser Enhanced Sciences, Cairo University.
- International coordinator of the Egyptian ORL society.
- Visiting Professor in Philips University, Marburg, Germany With continuous lecturing in courses and conferences since 2002.
- After establishment of the European Academy of ORL-HNS, became its regional coordinator and representative in the Middle East since 2007. Actively shared in all European congresses in Vienna, Mannheim, Nice and Prague.
- Got the membership of E.U.F.O.S. to Egypt and became its representative in it. 29/4/2013
- Representative of Egypt and Middle East in CE-ORL-HNS. Since 12/12/2013
- Representative of the European Academy of Sleep Medicine since 2008.
- International Faculty member in the European Board Examination of ORL-HNS of the UEMS.
- Member of the board of SDBS (sleep disorder breathing surgery) examination, Forli, Italy.
- Member of the Medical education committee of IFOS since 2013.
- Chairman of the advisory board of IFOS Seoul 2013, and IFOS Paris 2017.
- Board member of the Egyptian society of ORL and allied sciences.
- Corresponding member of the German society of ORL-HNS.
- Member of the International Academy of Otorhinolaryngology and Head and Neck surgery (IAO-H&NS).
- Member of the ELS (European Laryngological Society).
- Member of the European Society of Photobiology.
- Co-editor of the Journal of the Egyptian ORL society.
- Co-editor of the Egyptian journal of ORL and allied sciences.
- Member of the Editorial board of the European Archives of Oto-Rhino-Laryngology, Head and Neck surgery.
- Member of the international board of the Acta Oto-Laryngologica journal.
- Member of editorial board international committee of the ENT News .
- Member of the advisory board of the Folia otolaryngologia.
- Member of the international board of the Bulgarian Bulletin.
- Member of the advisory board of the Journal of the Royal Medical services, Jordan.
- Honory member of IAPO (Interamerican Pediatric ORL).
- Honory member of the Italian rhinological society.
- Honory member of the Kazakhstan rhinological society.
- Honory member of the Bulgarian rhinological society.
- Honory member of the Indian Voice association.
- Member of the Egyptian council of foreign affairs.
- Secretary general of the Egyptian Red Crescent in Giza.
- Author of 60 papers published in different medical journals.
- Director of the conference center, Faculty of medicine, Cairo University.
- Consultant in many governmental and private hospitals.
- Participated in many congresses, symposia, meetings, and courses all over the world, as a guest speaker, Faculty member, Jury member, chairman, and organizer.
- Actively participated in IFOS congresses in Sydney, Cairo , Rome, Sao Paulo, and Seoul.



Curriculum Vitae

Assoc. Prof. Mario Milkov, MD, PhD

Mario Petrov Milkov was born on June 6, 1968 in the city of Varna, Bulgaria. At present he works in the Department of Prosthetic Medicine and Orthodontics, Faculty of Dental Medicine, Medical University of Varna, BG-9002 Varna, Bulgaria.

E-mail: mario.milkov@gmail.com

Mobile phone: 0359-888897403

Education: 1983-1986 – Third Natural and Mathematical Secondary School of Varna

1989 – 1995 – Medical University of Varna

1998 – 2001 – specialization in otorhinolaryngology in the Medical University of Varna

2002 – acquired specialization diploma in otorhinolaryngology

1999 – 2005 – full-time PhD studies in the Medical University of Varna

2006 – awarded PhD degree in medicine

2013 – Associate Professor

He performed numerous short- and long-term specializations in Germany, Switzerland, Austria, Israel, the USA, Turkey, and Norway.

In 2002 – 2006, he worked at the Diagnostic and Consulting Centre, St. Marina University Hospital of Varna.

In 2006 – 2012, he worked at St. Petka Outpatient Medical Centre of Eye and Ear Diseases, city of Varna.

Since 2007 onwards, he is active at the Faculty of Dental Medicine, Medical University of Varna.

His main research topics include otology, neuro-otology, biomaterials, obstructive sleep apnea, ossicular prostheses, and vestibology. He has published in a broad spectrum of diagnostic and therapeutic aspects of otorhinolaryngological diseases.

His publication activity consists of six monographs and book chapters, one textbook, 90 journal papers, two full-text papers in congress proceedings, 65 abstracts in 110 national and international congress proceedings as well as one patent.

He was member of the research project of the Medical University of Varna entitled:

„Evaluation of the effect from the application of oral and endonasal appliances in the treatment of patients with habitual snoring and obstructive sleep apnea.

He is member of 23 national and international scientific societies and associations as well as secretary, Bulgarian Society of Otorhinolaryngology, Head and Neck Surgery;

secretary, Balkan Association of ORL & HNS;

regional secretary of EAONO for Bulgaria;

president, Bulgarian Obstructive Sleep Apnea and Snoring Society,

and president, International Black Sea Association of Otology & Neuro-Otology (IBSAON).

He acts as scientific secretary of the „International Bulletin of Otorhinolaryngology – Varna“ (texts in Bulgarian and in English).



Curriculum vitae

Borisenko Oleg Nikolaevich

ENT-Doctors

Borisenko Oleg Nikolaevich – ENT doctor of the Institute of Otorhinolaryngology named after. Prof. AI Kolomiychenko, Leading Researcher, Doctor of Medical Sciences. Kiev

Specialized in:

- Treatment of chronic otitis media,
- sensorineural hearing loss,
- otosclerosis,

- pathology of the auditory tube,
- pathology of the facial nerve,
- stenosis and atresia of the external auditory canal,
- preauricular fistula,
- Acoustic neurinoma,
- cochlear implantation,
- tumors of the temporal bone,

Tumors of the tympanic and jugular glomus.

Make an appointment to Borisenko Oleg Nikolaevich by phone: (044) 483-70-47.

The doctor accepts the Institute of Otorhinolaryngology. Professor AI Kolomiychenko of the Academy of Medical Sciences of Ukraine in Kiev.



Curriculum vitae

Prof. Dr. Tobias Kleinjung, MD

Tobias Kleinjung, MD, born in Gießen/Germany, study of medicine at the Ludwig-Maximilians-University in Munich/Germany from 1988 – 1995. From 1995 – 2001 residency program in ENT medicine at the Department of Otorhinolaryngology, University of Regensburg/Germany. In 2001 he completed his specialist training in ENT medicine. From 2002 – 2010 senior ENT surgeon at the Department of Otorhinolaryngology, University of Regensburg/Germany. From 2006 – 2010 head of the interdisciplinary tinnitus clinic at the University of Regensburg. Since 2011 head of the outpatient clinic and Professor at the Department of Otorhinolaryngology at the University Hospital of Zurich/Switzerland.

Focus of research: new treatment strategies in sudden hearing loss and tinnitus, treatment of chronic tinnitus with neuromodulation, neuroimaging of tinnitus.

Publications: multiple articles and book chapters on treatment and diagnosis of tinnitus in scientific journals, co-editor of “Textbook of Tinnitus” (Springer, 2011) and “Tinnitus – Pathophysiology and Treatment” (Elsevier, 2007)

Website: <http://www.orl.usz.ch>





Curriculum vitae

Surname(s)/First name(s)

Address(es)

Telephone(s)

E-mail(s)

Nationality(-ies)

Date of birth

Gender

Tsvetkova Antoaneta Zdravkova

17, Professor Derjavin, 9000, Varna, Bulgaria

0885 650 885

antoaneta.tsvetkova@mu-varna.bg

bulgarian

23.07.1971

female



Work experience

Dates

09.2011 – now

Occupation or position held

Associate professor, Head of department

Name of employer

Medical University „Prof. Dr. Paraskev Stoyanov“ – Varna

Type of business or sector

Education

Dates

2005 – 09.2011

Occupation or position held

Office manager

Name of employer

„Yavlena“ Varna

Type of business or sector

Real estate

Dates

2000 – 2005

Occupation or position held

Pharmacist

Name of employer

Pharmacy „Herba“

Type of business or sector

Healthcare

Dates

1998 – 2000

Occupation or position held

Pharmacist

Main activities and responsibilities

Control, expedition

Name of employer

„Sanita“ – Varna

Type of business or sector

Healthcare

Curriculum vitae

Assoc. Prof. Georgi Marinov, MD, PhD

Assoc. Prof. Georgi Marinov, MD, PhD is born on August 13th, 1939 in Dobrich. He received MD from Medical University of Sofia in 1963. From January 1965 until July 2012 he works in the Depart. of Anatomy, histology and embryology of Medical university of Varna – achieved a PhD (1970), was elected and appointed as an Assistant Professor, Associated professor and Head of the Department (2000-2005), Head of the Medical College of the university (1985-1987), as well as Vice rector (1985-1987) and Rector of the Medical University of Varna (1987-1990). Now he is Member of the Board of trustees of the university. He collaborate with the Medical Academy in Wachovia and Copernicus university in Poland, Ovidius University in Constanta, Turkish Anatomical Society, take part in five international scientific projects with the Universyté Laval, Quebec, Canada, Aristotelian University, Thessaloniki, Greece, Donghua University, Songjiang campus, Shanghai, P. R. China, University of Cologne, Germany. The publication record of Assoc. Prof. G. Marinov includes (as author or co-author) chapters in 5 books, 185 scientific articles, as well as over 240 scientific presentations in Congress, sessions etc., in the fields of morphology of vascular system, vascular and endovascular prostheses, paleoanthropology, paleopathology, history of medicine, etc. He has already co-organizer of seminars and congresses. During his term as Rector the financial crisis experienced by the University after its separation from the Medical Academy (1987), was overcome as well as, the University Hospital reached its maximum capacity with all structural units and divisions in place.



Автобиография



Златина Желязкова Желязкова

Адрес: ж.к. „Яворов“, бл. 9, вх. Б; гр. София; 1224; България

Телефон: GSM: +359 888 766 004

E-mail: dr.z.zhelyazkova.phd@gmail.com

Националност: българска

Дата на раждане: 27.07.1960 г.

ТРУДОВ СТАЖ: 32 години

Вид на дейността: Оториноларинголог, отоневролог

ОБРАЗОВАНИЕ: 1978 – 1984 – Медицинска академия – София

1974 – 1978 – Английска езикова гимназия – София

1967 – 1974 – 12-то Общообразователно училище – София

Медицински сертификати: 2004 – Диплома за доктор по медицина

1995 – Сертификат за правоспособност по „Отоневрология“.

1992 – Сертификат за правоспособност по „Аудиология – аудиометрия и импедансметрия

1991 – Диплома за специалност оториноларингология

1984 – Диплома за специалност медицина

Професионален опит: август 2015 – Barnet Hospital, London

юли 2015 – Queen’s Hospital, Romford

юли 2015 – Lewisham University Hospital, London

април 2015 – Queen’s Hospital, Romford

януари 2015 – Queen’s Hospital, Romford

ноември 2014 – Princess Royal Hospital, Orpington, Kent

октомври 2014 – Princess Royal Hospital, Orpington, Kent

март 2014 – Guy’s and St Thomas’s Hospital, London

февруари 2014 – Princess Royal Hospital, Orpington, Kent

януари 2014 – Medway Maritime Hospital, Kent

юли – август 2013 – The National Hospital of Neurology and Neuro-surgery, UCL, London

2010 – понастоящем – МЦ „Св. Пантелеймон“, гр. София

1993 г. – 2010 – Медицински институт – МВР – гр. София

1988-1993: зав. оториноларингологичен кабинет, 19-та поликлиника, гр. София

1985-1988: зав. оториноларингологичен кабинет, поликлиника, гр. Костинброд

Публикации и доклади: Общо 35 публикации.

8 доклада на международни форуми в чужбина над 10 доклада на български конференции и симпозиуми.

Членство в организации: Български лекарски съюз

Софийското дружество по оториноларингология.

Българско национално сдружение по оториноларингология.

Балканско дружество по оториноларингология.

Автобиография

Ирина Витальевна Бодрова

Професионална квалификация: Лекар

Придобити специалности: Рентгенология (Образна диагностика), Здравен мениджмънт

Научно звание: доктор на медицинските науки

Академична длъжност: Доцент в катедра „Образна диагностика и лечение“, Факултет медицина, ФГАОУ ВО Первый МГМУ имени И. М. Сеченова Минздрава России (Сеченовский Университет)

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iv-bodrova@mail.ru



През 2001 г. завърших Първи московски медицински университет, през 2003 г. завърших ординатура (специализация) по специалност „Рентгенология“.

През 2008 г. защитих дисертационен труд на тема „Компютърна томография в диагностика при заболявания на външното и средното ухо“ за присъждане на образователна и научна степен „Доктор“.

През 2015 г. е присъдена научна степен „Доктор на науките“ след успешна защита на дисертационния труд на тема: „Мултиспирална компютърна томография в диагностиката на причините за кодуктивна и смесена глухота“.

Работи в Първи московски медицински университет като доцент в катедра „Образна диагностика“ и като лекар-рентгенолог (компютърна томография) в отделение „Образна диагностика“ на Университетска клиника № 1.

За първи път в света тя се въведе иновационни методики, свързани с изследванията на подвижността на слуховите костици и протез стремена с помощта на функционална мултиспирална компютърна томография (фМСКТ). Разработих фМСКТ-методики за слуховата тръба, за очните мускули. Също така внедрих различните протоколи за изследвания: преди стапедопластика, протокол за оценка на протез стремена и т.н., позволяващи да намали риска на интероперационни усложнения; да подобри подготовката на лекаря за операция, оптимално да се избере тактика и обем за оперативна интервенция, в това число и при пациенти, на които им е било направено операция (стапедопластика, саниране), при които резултатите са негативни. Разработих и организирах внедряване на диагностичен протокол за образни изследвания в оториноларингологията в лечебните заведения в гр. Москва.

Автор и съавтор е 9 патента в областта на оториноларингология и образна диагностика, на повече от 90 публикации, съавтор на национални ръководства за оториноларингология.

През 2012 г. – лауреат на премия РАМН (Российска академия на медицинските науки).

Curriculum vitae



Yıldırım A. Bayazit

EDUCATIONAL STATUS

1985 – 1992: Medical education, Hacettepe University Faculty of Medicine, Ankara, Turkey

1992 – 1996: Residency training in otolaryngology head neck surgery, Gazi University, Faculty of Medicine, Ankara, Turkey

PROFESSIONAL STATUS

2013 Head of the department of otolaryngology, faculty of medicine, Medipol University, İstanbul, Turkey

- 2012 Consultant, King Saud bin Abdulaziz University, National Guard Hospital, Riyadh, Saudi Arabia
- 2007 – 2013 Professor, Department of Otolaryngology, Gazi University, Ankara, Turkey
- 2005 Manchester Children's Hospital
- 2002 – 2007 Associate professor, Department of Otolaryngology, Gazi University, Ankara, Turkey
- 2001 – 2002 Associate professor, Department of Otolaryngology, University of Gaziantep, Turkey
- 1999 – 2001 Assistant professor, Department of Otolaryngology, University of Gaziantep, Turkey
- 1998 – 1999 ENT specialist, Department of Otolaryngology, University of Gaziantep, Turkey
- 1997 – 1998 ENT specialist, Ministry of Health Hospital, Afsin, Kahramanmaraş, Turkey

MEMBERSHIP WITH THE PROFESSIONAL SOCIETIES

- 2016 Editorial Board Member, Auris Nasus Larynx, Japan
- 2016 President, International Cochlear Implant Society of Turkey
- 2015 Member, Editorial board, Biomedicine Hub
- 2015 Vice president, Skull Base society, Turkey
- 2014 President, Skull Base society, Turkey
- 2014 Member, European Skull Base Society
- 2010 Member, Executive committee, Mediterranean Society of Otology and Audiology
- 2010 Secretary general, Turkish Otology Neurotology Society
- 2010 Member, Politzer society
- 2010 Associate Editor, The Open Journal Otorhinolaryngology Head & Neck Surgery
- 2009 Member, Editorial board, The Open Neurosurgery Journal
- 2008 Member, Editorial board, The Journal of International Advanced Otology
- 2000 Member, Editorial board, ORL-Journal for Otorhinolaryngology and Its Related Specialities.
- 2001 Member, Ethics Committee, University of Gaziantep Universitesi
- 1999 Member, Editorial board, Turkish Journal of ENT
- 1999 European Academy of Otology Neuro-Otology
- 1992 Turkish society of Otolaryngology Head Neck Surgery

Curriculum vitae

Anda Simina Ștefan

34, Sudului Street, Tîrgu Mureș (Romania)
0040743734600
stefan.anda23@gmail.com



WORK EXPERIENCE

01/01/2017–Present Resident physician
E.N.T. Clinic of Tîrgu Mureș Emergency County Hospital,
Tîrgu Mureș (Romania)

EDUCATION AND TRAINING

2010–2016 General Physician University of Medicine and Pharmacy, Tîrgu Mureș (Romania)
2006–2010 Technician in economical activities Economic College, Tîrgu Mureș (Romania)

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
Spanish	B1	B1	B1	B1	B1
French	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills – good communication skills gained through my experience as a volunteer during my years as a student in collaboration with the Student's League of University of Medicine and Pharmacy of Tîrgu Mureș;

Driving licence B

ADDITIONAL INFORMATION

Conferences National Conference of E.N.T and neck surgery co-author on the paper: Evaluation of the quality of life in patients with cochlear implantation;

Publications Long term follow up after TUR-B for NMIBC. An external validation of EORTC risk tables, Eur Urol Suppl 2015; 14(6): e1325

Presentations 1. EORTC scores of recurrence and progression in a Romanian cohort;
2. XRRCC1ARG194TRP gene polymorphism and risk of lymphoma in a Romanian population;
3. CAT C262T polymorphism and susceptibility to malignant lymphomas;

Автобиография



Тодор Симеонов Широв

Професионален адрес за кореспонденция:

УМБАЛ Царица Йоанна-ИСУЛ,

Клиника по УНГ, Отделение по отоневрология,

ул. Бяло море № 8, гр. София 1527, България

Телефон: +359 887 299938; факс: 359 2 9432552; е-мейл: shirov@hotmail.com

Квалификации (започнете с последната):

Степен/Диплома	Номер на диплома/Дата	Институция издала дипломата, град, държава
Защита на Докторска дисертация на тема „Стабилометрия в норма и патология“	2012	Медицински университет – София
Здравен мениджмънт	2002	Медицински университет – София
Специализация по отоневрология и електрофизиология	1991	Медицинска академия – София, УНГ клиника, гр. Утрехт, Холандия
Специализация по отоневрология и аудиология	№ ПК 252/2006	Медицинска академия – София, Катедра УНГ болести, Сектор отоневрология, гр. София, България
Специалност Уши-нос-гърло	№ 25073/1983	Медицинска академия, Катедра УНГ болести, гр. София, България
Медицина	№ 003210/1978	Медицинска академия, гр. София, България
Публикации, Патенти, Рационализации	3 рационализации. 55 научни статии и публикации в различни български и чуждестранни списания. 2 публикувани монографии: Основи на стабилотрията (1995); Мениерова болест (1998) Участие в написване на учебник по УНГ (1999) Учебник по УНГ болести за стоматолози – в съавторство (2004)	

Професионален стаж:

Период	Позиция	Институция или компания, град/държава
2010 -	Доцент	Клиника по УНГ болести, Отделение по отоневрология, УМБАЛ „Царица-Йоанна-ИСУЛ“, гр. София, България
1990 – 2010	Главен асистент	Клиника по УНГ болести, Отделение по отоневрология, УМБАЛ „Царица-Йоанна-ИСУЛ“, гр. София, България
1987 – 1990	Старши асистент	Клиника по УНГ болести, Отделение по отоневрология, УМБАЛ „Царица-Йоанна-ИСУЛ“, гр. София, България
1984 – 1987	Асистент по УНГ	Катедра по УНГ болести, Медицинска академия – София, База ИСУЛ, гр. София, България
1980 – 1983	Клиничен ординатор по УНГ болести	Катедра по УНГ болести, Медицинска академия – София, База ИСУЛ, гр. София, България
1978 – 1980	Ординатор	Отделение по спешна и неотложна помощ, Районна болница, гр. Казанлък, България

Предишен опит в областта на клиничните проучвания: Участие в 4 фаза 3, клинични изпитвания като изследовател и главен изследовател през 2002; 2007; 2010; 2012

Обучение по Добра клинична практика – 2008; 2012

Чужди езици: Английски – писмено и говоримо

Руски – писмено и говоримо



Curriculum vitae

Dusan Pavlovic, ENT consultant

Hearing and Balance Center Belgrade
Gospodar Jovanova 9, 11000 Bgrade, Serbia
Email: drdusan.pavlovic@gmail.com
www.dusanpavlovic.com

Academic qualifications

2013 – 2015 Sub-Specialisation in audiology Video head impulse test in peripheral vestibular disorders at Faculty of Medicine Novi Sad
2000 – 2004 ENT resident at Medical Military Academy
1992 – 1999 Belgrade University School of Medicine



Work Experience

2009 – present Director and owner of private practice Hearing and Balance Center Belgrade
2005 – 2009 ENT consultant at Health Care Institute of Ministry of Internal Affairs
Since 2011 President of Serbian Society of Otology and Audiology
Since 2014 Member of Prosper Meniere Society

Since 2011 Founder of regional conference in field of neuro-otology Belgrade Balance Forum, a well recognized regional conference that seeks to give new insights in vestibular diagnostics and treatment, bringing together well known experts from the whole world to share their experience with regional experts. Over the past five years, this conference hosted the most prominent figures in the field of neuro-otology and over 500 participants from south-east Europe.

- 1st Belgrade Balance Forum- Contemporary approach to vertigo, [Mohamed Hamid, Pierre Bertholon] September 2011,
- 2nd Belgrade Balance Forum, New diagnostics in neurotology, [Michel Toupet, Alexander Blodow, Debbie Cane] April 2014,
- 3rd Belgrade Balance Forum, Clinical updates in vestibular disorders, [Ji Soo Kim, Andreas Zwergal] March 2015,
- 4th Belgrade Balance Forum, How far have we gone in diagnostics and treatment? [Mohamed Hamid, Michael von Brevern, David Szmulewicz] April 2016,
- 5th Belgrade Balance Forum , Spreading new information in neurotology, [David Zee, Mohamed Hamid, Augusto Casani, Pierre Bertholon, Robert Gurkov, Tatjana Tomanovic, Slobodan Apostolski, Dusan Pavlovic] April 2017.

Curriculum vitae

Name Dilyana Vicheva Vicheva

Address 81A „Ilarion Makariopolski“ str., 4000 Plovdiv, Bulgaria
Telephone +359 888 22 36 75
E-mail dilyanav@yahoo.com; vdilyana@gmail.com
Date of Birth 09.10.1971 г.

- From September 2016 to now Medical University – Plovdiv, Bulgaria and University of Rousse „Angel Kanchev“



Curriculum vitae



Dr. Hussain Abdul Rahman

DATE OF BIRTH	3.10.1953
NATIONALITY	United Arab Emirates
ADDRESS	Ministry of Health, Headquarters P.O. Box 1853, Sk Mohammad Bin Zayed Road, Dubai, UAE
TELEPHONE NUMBER	Mobile – 050-6464643
E-MAIL	hussain.alrand@moh.gov.ae

QUALIFICATIONS MBChB, Cairo University Medical College, Cairo 1980
M.Sc. Otorhinolaryngology – Cairo University Medical College (Cairo, Egypt)
– November 1985.
German Board (Facharzt) Otorhinolaryngology
The Medical Association of Northrhine Dusseldorf, Germany – June 1993.
FRCS (Edinburg) – December 2009
Professional Diploma in Management of Health Services and Social Care
– The American University in Cairo

PRESENT APPOINTMENTS: Assistant Undersecretary
For Health Centers and Clinics and Public Health
Ministry of Health, UAE
Associate Professor and Head of ENT Section– Dubai Medical College for
Girls.
IFOS Regional secretary – Middle East and Gulf region
President – ARABFOS
President – GCC ORL Head and Neck Society
President – Emirates ORL Head and Neck Society

Main field of interest: Rhinology and Head and Neck Surgery.

Publications: Numerous (can be provided on request).

Curriculum vitae

Prof. Dr. Cem UZUN

Cem Uzun is Professor of Otorhinolaryngology, Head and Neck Surgery (ORL&HNS) at Trakya University School of Medicine, Edirne, Turkey. He has been the Visiting Professor at University of Copenhagen, Denmark via Danish Government Scholar in 2001 and Fulbright Postdoc Scholar at University of Miami, USA in 2008-2009.

He is the General Secretary of Balkan Society of ORL&HNS and represents Turkey at ORL section of the European Union of Medical Specialists (UEMS). He is the responsible professor of Neonatal Hearing Screening Program in Trace region of Turkey. He is the founder and board member of Trakya Society of ORL&HNS. Currently, he is the Pro-Rector of Trakya University, Edirne, Turkey.

Prof. Uzun was editor (2012-2016), associate editor (2004-2008) and currently, he is the Editor at Large of Balkan Medical Journal and at the editorial board of several international journals. He is the member of European Association of Science Editors, Committee on Publication Ethics, World Association of Medical Editors and Council of Science Editors.

Prof. Uzun has received Trakya University Outstanding Young Faculty Award in 2000 and the Science Award in 2013. He has been awarded as the „Researcher of the Year“ by Turkish Underwater Research Society in 2003 and as the „Goodwill Ambassador to the American Academy of ORL&HNS from Turkey and the Balkans“ by the American Academy of ORL&HNS in 2011.

He has over 100 publications in peer-reviewed journals and books and over 200 presentations at national and international scientific meetings. His main research areas are otology, neurotology, audiology, pediatric otology and neurotology, underwater medicine, experimental otology and audiology, medical publishing and publication ethics.



Curriculum vitae

Yuliyen Kostadinov, MSc, PhD student

Yuliyen Kostadinov is a doctoral student at the Department of Economics and Healthcare Management at the Faculty of Public Health at Medical University „Prof. Dr. Paraskev Stoyanov“ – Varna. He has a Master degree in international economic relations from the Free University – Varna. In 2011 he conducted the post graduate program in Health Care Management at the Medical University – Varna. Kostadinov has a professional experience as a medical representative in Abbott Laboratories – Bulgaria (2012) and in the field of international relations and supply management for dental products at Dental clinic (2009 – 2010) and as a representative for Bulgaria of Carfarma Cosmetics Co. Turkey (2007 – 2010). Since 2012 he is a CEO of Timeinvest Group and is combining his business activities with an academic development working in the field of corporate social responsibility in frame of his PhD research. His publications are mainly in this field, as well as in the field of pharmacy, dental medicine, public health and innovations.



Curriculum vitae

Prof. Rashid Khalfam Salim Al-Arabi



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Head ENT Unit, department of Surgery Head, Medical education & informatics Unit College of Medicine and Health Sciences Sultan Qaboos University Muscat, Oman

1974 – 1986: Primary and Secondary School, Sultan bin Saif School Ibri, Oman

1986 – 1993: College of Medicine, Sultan Qaboos University SQU, Oman

1993: MD Sultan Qaboos University SQU, Oman

24/6/96: Oman Medical specialty Board Examination (Basic Science and Skills)

1997 – 2003: Higher surgical training and research, UK. (O.D.T.S, royal College of Surgeons of Edinburgh and University)

November 1998: FRSC (ENT), Royal College of Surgeons and physicians of Glasgow, Scotland, Awarded March 1999

2000 – 2003: Postgraduate Diploma (MBA course) in Health care Management, Queen Margaret University, Edinburgh, UK (Part-time)

Curriculum vitae

Prof. Dr. O. Nuri Özgürin



Prof. Dr. O. Nuri Özgürin (1954, Istanbul) finished Ankara University Medical School in 1978 and attended to Otolaryngology Dept. of the same University for residency.

Following residency, he worked for several hospitals (1982 – 1984 Sivas, 1984 – 1986 Gelibolu, and 1986-1990 Ankara). He attended to Gazi University ORL Dept. as an associate professor during the years 1990 – 1992.

Following working for Bayindir Hospital within the years 1992 and 2002, he attended to Baskent University as full-time professor for 6 years. He is still working for Bayindir Hospital again since 2007. Dr. Özgürin's special interest is on otology and neurotology.

He has 37 articles published in international journals. Additionally, he has two chapters and he made the editorial of a book in international press. He has written 9 chapters for the

books published in Turkish language and 40 articles for national journals.

He has been involved in more than 200 International Meetings as Lecturer, Panel Members and Instructor.

He is the immediate past president of The European Academy of Otolaryngology, President of Vertigo Academy International, Past President of the Board of Directors, Politzer, Chairman of Working group of Meetings and Scientific Activities, European Academy of Otolaryngology and Neurotology, and Chairman of Working group on Guidelines on Cholesteatoma.

He conducts the Journal of International Advanced Otolaryngology as being Editor in Chief. Also, involved in many scientific journals' editorial board.

He chaired 11 International Meetings on Otolaryngology and Neurotology.



Curriculum vitae

Prof. Dr. Vijayendra Honnurappa,

Director, Vijaya ENT Care Centre, Bangalore, India

Past President of Indian Society of Otolaryngology (ISO)

Presented more than 100 papers at State, Zonal, National and International Conferences with Many awards.

Conducted **169** Live Micro Ear Surgical Demonstrations all over India and abroad

Delivered **218** Guest Oration Lectures all over India and abroad.

Conducted **137** Live Temporal Bone Dissection demonstrations

Moderated many panel discussions at State, Zonal and National Conferences

Vijaya ENT Care Centre is tertiary referral Superspeciality Otolaryngology Centre having referral from all over India and Nearby countries particularly for facial nerve palsy cases.

Facial Nerve grafting cassette has been awarded as Best Video Cassette in 51st AOI National Conference at Cochin in 1999.

Vast experience in varieties of facial nerve disorders

Operated **127** cases of Iatrogenic Facial Nerve Palsy – Innovated Suture Less Grafting Technique.

Operated **82** cases of Post-traumatic facial nerve palsy- Innovated technique of Transcanal Facial Nerve Decompression, which is popular all over the world for the decompression of facial nerve from meatal foramen upto the Stylo-mastoid foramen.

Operated **47** cases of Unrecovered Bell's palsy with excellent postoperative results.

Operated **21** cases of Facial Nerve Schwannoma

Paper publications

Indian Journal of Otolaryngology I.J.L.O. – **19** papers published.

Journal of Rhinology- Otolaryngology (JRO) – **2** papers published on Surgical management of Facial Nerve Palsy in cases of Unrecovered Bell's Palsy and Ramsay Hunt Syndrome.

Published Book „COLOR ATLAS ON TEMPORAL BONE DISSECTION“

Author Dr. H.Vijayendra



Abstract

Cochlear implant: risks and benefits

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Introduction: A cochlear implant is an implanted electronic hearing device designed to produce useful hearing sensations to a person with severe to profound nerve deafness by electrically stimulating nerves inside the inner ear.

Material and method: We used some retrospective studies that showed all the risks that a patient who will undergo a cochlear implantation will be subjected to, but also all the benefits. We need to consider and explain to the patient about the risks of general anesthesia, about the risks from the surgical implant procedure and other risks associated with the use of cochlear implant.

Results: Despite of all these risks, the benefits can be wonderful. For example, the patients can understand speech, can talk or hear music, can make phone calls, increasing the quality of life. In one words, the patients with cochlear implant can hear, thus enjoying life.

Conclusions: There are risks involved to take the cochlear implantation, as well as happiness after that. That's why it is important to balance, and talk to a doctor to perform a search about the implant before making the decision.

How to manage complications after cochlear implantation

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Introduction: Cochlear implantation represents an effective way of treatment of severe and profound sensory-neural hearing loss. Because it is a complex surgical procedure, some of the patients that undergo cochlear implantation can suffer postoperative complications.

Aim: The purpose of our study is to analyze the short and long term postoperative complications that can occur after cochlear implantation and how to manage them in the shortest time and at the lowest cost.

Material and method: We have conducted a prospective study of 12 patients who were admitted as diagnosed with severe or profound sensory-neural deafness, and later on implanted in the E.N.T. Clinic of Tirgu Mures County Hospital during 2014-2017.

Results: After cochlear implantation, the complications that occur more often are the minor ones, such as flap swelling, minor wound infections, acute otitis, hematoma, or temporary facial weakness. This type of complications can be easily managed with conservative treatment or minor intervention. Rarely, there can appear major postoperative complications, such as device failure, misplaced electrodes, flap necrosis, or meningitis. This kind of major complications are rare, and they often require reintervention. In our study, there was one patient with flap necrosis, another one with cerebro-spinal fluid gusher, and a third one with device failure that needed to be reimplanted.

Discussions: Cochlear implantation is an efficient way to treat sensory-neural deafness. Careful preoperative and postoperative preparations are required. Although this is a major surgery, complications occur rarely. However, patients can still present with minor complications that be managed by conservative treatment, and that is why, long-term follow-up is needed.



Implantable bioelectrical system for blink restoration in experiment

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Different implantable electrical neuro- and myostimulators and electromyographic (EMG) recording systems are used in clinical practice and experimental investigations. Symmetrical innervation of mimic facial muscles provides clinicians with a natural trigger for an implantable mimic muscle microstimulator in patients with facial palsy. The goal of our investigation is to define the ability to use implantable bioelectrical systems for restoration of complete and synchronic blinking in case with unilateral facial injury. Moreover, our goal is to define optimal stimulation parameters which will allow obtaining the state of complete short- and longtime eye-lid closure.

Materials and methods: Experimental part was performed in adult rabbits, which have undergone full transection of main trunk of facial nerve, implantation EMG recording electrodes into healthy OOM, and stimulating electrodes in paralyzed side. This system consists of EMG recording electrodes which implanted in healthy orbicularis oculi muscle, EMG amplifier, DAC, microcontroller, which detects EMG pattern and triggers the microstimulator with electrodes which evoke contraction orbicularis oculi muscle in paralyzed side. The bioelectrical system of blinking was implanted in the back of animals under the skin. The device was activated. There was established complete synchronous eye closure in all of animals, after tuning the parameters of stimulation. We performed comparison of different stimulation's parameters: mono- and biphasic impulses, single and serial impulses with different frequencies and amplitudes.

Results: Using biphasic serial impulses for stimulation with frequency 50 Hz, amplitude 2 mA, and impulse duration 2 ms allowed complete synchronous eye closure in all the animals.

Conclusion:

1. Proposed implantable bioelectrical system allows reaching complete closure of the eye by direct stimulation of denervated orbicular oculi muscle, which is triggered from healthy side.
2. Optimal pattern for stimulation is a series of biphasic impulses with frequency of 40-50 Hz, amplitude of 2mA, and impulse duration of 2 ms.
3. The software for proposed system allows detecting blinking in healthy side in more than 80% cases, that permits sufficiently synchronize detection and stimulation in bioelectric system of blinking.

Three-dimensional evaluation of the semicircular canals, vestibule and cochlea and their surgical neuroanatomy: a radioanatomical study

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Objective: Three dimensional volume-rendered computed tomography images have been used widely to demonstrate the anatomy of the temporal bone. This anatomical knowledge helps to understand complex anatomy and improves the ability to evaluate pathologic conditions. Knowing the morphological relation of semicircular canals, vestibule, and cochlea and their anatomical relations allow to discuss their importance regarding surgical planning and this will provide more safe surgeries for many approaches. The aim of study was to evaluate semicircular canals, vestibule, and cochlea and related neuroanatomical structures with three dimensional reconstruction of radiological images and its anatomical confirmation on cadavers.

Material and Methods: Three dimensional reconstructions were performed on selected 20 computed tomography scans from 20 patients with no intracranial pathology and the images were imported into the imaging software OsiriX v.3.7.1. Three dimensional reconstructed colored images of cochlea, semicircular canals and internal acoustic canal were created using Osirix software. For anatomical confirmation, important morphological parameters and related anatomical structures on five cadavers were evaluated.

Results: Representations of the corresponding structures were obtained step by step. Preoperative important morphological relations were determined for surgical planning. In cadavers, the three dimensional course was evaluated and reconfirmed anatomically. The three dimensional reconstruction of the complex shape of the osseous labyrinth was accepted as satisfactory. This gave an opportunity to observe the reconstructed structures at various angles and to show anatomical structures

embedded in bone. This combination model is a useful tool for postgraduate education of surgeons and for further morphometrical studies. Precise understanding and this novel combination allows to correlate and to confirm the relation of the neuroanatomical structures before surgery.

Conclusion: Preoperative knowledge of the relations of the inner ear structures is useful for the surgical approaches especially when preserving the otic capsule. The identification of semicircular canals, vestibule, and cochlea and their relation with petrous bone landmarks can be useful to get a general orientation and a better knowledge of the three dimensional anatomy. This easy preoperative evaluation tool can help surgeon to be navigated and to understand the complicated anatomy and relations for each patient.

Adenoidectomy and otitis media

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Adenoid enlargement has traditionally been considered a factor in otitis media; adenoid size, however, does not appear to be correlated with otitis media occurrence. Presence of pathogenic bacteria in the adenoids of children with otitis media has been shown, and adenoidectomy appears to affect the middle ear primarily by removal of the source of infection in the nasopharynx. Three recent randomized, controlled studies showed the efficacy of adenoidectomy in the treatment of chronic secretory otitis media. In one study comparing no treatment, adenoidectomy, and adenotonsillectomy, a significant benefit was seen with adenoidectomy that was not enhanced by tonsillectomy. Another study that compared adenoidectomy, tympanostomy tubes, and a combination of the two showed a significant reduction in effusion time and less surgical retreatment over two years in both adenoidectomy groups. The third study demonstrated the effect of adenoidectomy in children with recurrent chronic otitis media with effusion after failure of tympanostomy tube insertion. All three studies showed that the effect of adenoidectomy was independent of adenoid size. This review discusses current concepts of adenoid physiology and pathology, the major adenoidectomy studies, and indications for the procedure.

Petrous bone cholesteatoma

B. E. Mostafa

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These are epidermoid cyst of the petrous temporal bone. They can occur anywhere in the middle ear, mastoid, petrous apex or CPA. They constitute 4-24% of all petrous bone pathologies. There is a male predominance [2-3:1]. They are usually silent for a variable length of time and can present at any age. The usual presentation is a complication. They are mainly diagnosed radiologically and the surgeons must have a very high index of suspicion when faced with a patient presenting with unexplained otological/neurological signs and symptoms. This presentation includes our institution's experience of 52 petrous bone cholesteatomas and highlights the diagnostic and therapeutic challenges this pathology represents. All the cases were surgically treated and the approach differed according to the anatomical location and hearing status of the patient. There were no mortalities in the series and no additional neurological deficits. In most cases, an additional conductive hearing loss was incurred in patients with residual hearing especially with subtotal petrosectomy.

Why the newborn hearing screening programs are important?

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The aim of the newborn hearing screening is to understand if the baby has hearing loss, as soon as possible. In the literature, the rate of the congenital hearing loss has been reported around 0.1-0.3%. As a congenital problem, this is a very high rate. It is desired to determine congenital hearing loss as soon as possible and if it necessary, to perform early rehabilitation. It is very important for the language skills; social, emotional, and cognitive development. According to the World Health Organization, newborn hearing screening tests should be done within the first three months after the birth. Today's technology let us to perform these tests very easily. In this lecture, with some examples, the importance of newborn hearing screening tests and the situation in the world will be discussed.



One technique for all kind of perforations: cartilage rod tympanoplasty

C. Uzun

Trakya University, Edirne, Turkey

Cartilage rod tympanoplasty, defined by Uzun in 2008, is a modification of cartilage palisade tympanoplasty. Cartilage with perichondrium at both sides is cut into thin cartilage rods which has piece of perichondrium at sides. The rods are placed side by side so that perichondria adhere and stabilize the reconstruction. This technique can be done either in underlay, onlay and over-under manner and also be applied in ossiculoplasty cases. The long-term graft intake rate is 95% when all kind of perforations and diseases such as cholesteatoma, non-cholesteatoma, tympanosclerosis, etc. are considered. In this presentation, those three techniques will be explained and recent long-term result will be given.

Pediatric patient with petrositis: A case report

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Petrous apicitis is an infectious osteitis resulting most often from adjacent spread of otomastoiditis, usually in the setting of a pneumatized petrous apex. The osteitis may cause Gradenigo's syndrome, a rare and potentially fatal condition defined as the clinical triad of ipsilateral acute otitis media (AOM), abducens nerve palsy and pain in the distribution of the ophthalmic and maxillary branches of the trigeminal nerve.

Case report: A 7-year-old girl presented at the Emergency Department on January 3rd with a month-long history of fatigue, headache since December 24th, eyelid edema of the left side since December 29th, retrobulbar pain in the left eye and febrility starting from today. In November 2016, the patient has had an episode of pain in the left ear, discharge from the ear lasting for three days, and rhinitis. Neurological examination on January 4th revealed positive meningeal symptoms such as neck stiffness, upper Brudzinski sign. No pathology of eye movements and after ear-nose-throat examination was detected. The diagnosis was serous meningitis and suspected encephalitis. The therapy administered was Dexamethasone and Acyclovir. Patient's health status worsened: multiple fever episodes daily and episodes of photophobia. The patient became agitated and reacted negatively to examination. Laboratory findings (January 9th): white blood cells 23,08x10³/μL, IL-6 69,0 pg/mL, and D-dimers 1764 ng/mL. Head magnetic resonance imaging (MRI) (January 9th): basal meningeal infiltration without signs of abscess, possible lesion of left pyramid apex, bilateral stenosing arteritis of carotid arteries at the petrous and sinus parts. Head computed tomography (CT) findings (January 9th): left pyramidal apex posterior wall destruction that corresponds to infiltrate in posterior cranial fossa, osteomyelitis and effusion in the middle ear. These findings were consistent with petrositis and Gradenigo syndrome. Antimicrobial therapy with Meropenem and Vancomycin was administered. Patient's health status improved, although febrile episodes and headache remained. Because of the raised D-dimer concentration (1764 ng/mL), prophylactic antithrombotic therapy with Enoxaparin was started. Tuberculosis and autoimmune pathology was excluded. Microbial blood culture showed *Streptococcus intermedius*. On January 18th, antibacterial therapy was changed to Cefepime and Vancomycin. Since January 11th onwards, there were no headache or dizziness anymore. The patient became more active, although regular mood swings were still present. D-dimer concentration remained elevated – 1279 ng/mL. On January 24th, control head MRI revealed subdural empyema of the right (contralateral to the affected pyramid) temporal and parietal region. Urgent osteoplastic trepanation of right frontotemporal area and subdural empyema evacuation surgery was performed. After one week, patient's health status noticeably improved, no mood swings were observed, she became lively and positive; MRI and CT showed positive dynamics. Patient received antibacterial monotherapy with Cefepime and after six weeks, she was discharged from hospital. It can be concluded that despite the highly developed medical technologies it is still challenging to determine the cause of cephalgia, excluding differential diagnosis and working in a multidisciplinary team. Gradenigo syndrome is reasonably rare. In many cases, manifestation of this syndrome is atypical. That is why the otorhinolaryngologist should always be cautious of it. Development of subdural empyema in this case was asymptomatic as patient's mother only reported changes in daughter's mood and behaviour. This might had happened due to the broad-spectrum antibacterial therapy the patient initially received. With the availability of antibiotics, control of petrous apex infection is more effective. However, spread of the infection beyond that area is still observed in some patients. Patients who fail to improve or develop progressive symptoms despite medical management may require surgical treatment. When necrotic bone is apparent, surgical drainage is a necessary adjunct to IV antibiotic therapy. Surgical approaches to an inflamed petrous apex depend on the patient's hearing status and temporal bone anatomy and on the surgeon's training and include the infralabyrinthine, transcanal infracochlear, transsphenoidal, translabyrinthine or subtotal petrosectomy, and middle fossa approaches. In this case the patient would benefit from transsphenoidal approach surgery performed after the petrous apex lesion was noticed.

Modern world, modern problems – adapting to life in the digital age

C. N. Grupcheva

Department of Ophthalmology and Visual Sciences, Medical University of Varna

Due to contemporary life style, we have people at any age that are spending most of their time on digital devices. Yes this makes our life easy, more interesting and substitutes for anything from book to real adventure, from calculator to complicated software analysis, from shopping to selling a product all over the world and much more... Of course anything is for a price and spending most of the time looking at digital device has well known consequences such as eye strain, red eye, vision fluctuation, symptoms of dryness and more. Recent research demonstrated that indoor time and close up work is correlated with myopia progression. This, however, is not just another negative effect, as the morbidity potential of myopia is significant, especially over time.

Where we are in year 2017?

Take your phone and make a list of activities and task for which you are using it. Certainly they would be more time in staring then in hearing. We use the phone virtually as portable computer, substitute of any electronic device... and even more, the social environment is pushing each of us to use it more and in more versatile ways. So might be the I-phone developers were thinking in prospective and really had an EYE-phone in mind... And may be our evolution led from Homo erectus to Homo sapiens and from Homo sapiens to Phono sapiens...

What can we do?

First of all we cannot live without our phones... so we must adapt to the situation. There are short term and long term considerations regarding to this adaptation process. The first group is related to instantaneous comfort and to well seeing, brighter eyes. That includes entire phone using population and requires specific measures such as precise refraction, proper correction, dry eye prophylaxis, balance of accommodative efforts and sufficient periods for eye recovery. The situation is more complex when the patient is a contact lens user. Some possibilities for improving the homeostasis of the ocular surface will be discussed. More complex is however, the option for preventing the long term complications mostly related to myopia. Our knowledge for myopia progression and management are limited and unfortunately are locked in a vicious circle. Currently, to control myopia practitioners use three modalities: special lenses (designed for the purpose of myopia control,) off label lenses (distant design multifocals) and ortho-K lenses. None of those is followed for long enough time and cannot be recommended for each and every case of myopia progression. The prevalence of myopia, however, increases leading to more and more negative consequences...

The future prospective...

Usage of digital devices is going to increase not only everyday but also lifetime. The users are going to be increasingly younger but also significantly older. This will increase the challenge of addressing protective and rehabilitation measures related to eye impact. The situation is going to be complicated by application of additional devices such as projecting glasses and lenses, virtual reality and other digital means that the future bring to us... One fact is certain that the eye health is in the hands of the each and every eye care practitioner and we must use the best of our up to date knowledge to promote, prevent and treat eye problems of the digital era...

Jugular bulb anatomy for lateral skull base approaches

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Objective: The jugular bulb is a dynamic structure that develops after the age of two years and reaches its definite size in adulthood. The relationship of the jugular bulb with the otic capsule has great importance during the lateral transmastoid skull base approaches. This study was designed to define the detailed anatomical relations of the jugular bulb with the facial nerve, sigmoid sinus, otic capsule and internal acoustic canal allowing the safe management of the jugular bulb via the lateral skull base approaches.

Material and Methods: Thirty-five formalin-perfused cadaveric temporal bones that had well mastoid and petrous pneumatization without any neurovascular variations on computed tomography scan were selected for the study. The bones were dissected via translabyrinthine approach.

Results: The dome of the jugular bulb was located under the facial nerve in 21 of the cases (60 %), in the mastoid cavity in 8 of the cases (22.9 %) and in the tympanic cavity in 6 of the cases (17.1%). The average distance between the dome of the jugular bulb and cochlea when the dome was located in the tympanic cavity was 6.13 ± 3.22 and the average distance between the dome of the jugular bulb and internal acoustic canal when the dome was located in the mastoid cavity was 8.22 ± 3.84 . No statistically significant correlation was detected between the radiological measurements and the position of the jugular bulb.



Conclusion: Adequate exposure has always been a major concert in skull base and petrous lesions. Major advantage of the translabyrinthine and infralabyrinthine approaches includes the absence of brain retraction whereas the neurovascular structures and the otic capsule are of great concern. The pre-operative verification of the JB radiologically is essential to avoid the problems associated with its variations and to decide the approach individually.

Publication ethics and misconduct cases

C. Uzun

Trakya University, Edirne, Turkey

Publication ethics is important for all researchers, scientists and authors. Unfortunately, education on publication ethics is not sufficient. In this presentation, the author will explain the international rules of publication ethics and will give some examples on several misconducts. Depending on his editorship experience, the author will explain the reasons of misconducts in our region and he will suggest how to avoid them in the academic world.

Systemic steroid therapy as a single modality in sudden hearing loss

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Objective: The aim of the study is to analyze the demographic features of patients with sudden hearing loss and their response to single systemic steroid therapy regiment as a primary treatment.

Methods: The study included patients who referred to the Department of Otolaryngology, Kırıkkale University Faculty of Medicine, with primarily idiopathic sudden unilateral hearing loss. Patient's charts were retrospectively analyzed from the database.

Results: Patients' mean age was 46.9 years. Among the patients, 58.3% were females and 41.7% were males. Dizziness was one of the main complaints in 70.8% of the patients whereas 83.3% of the patients complained of tinnitus. Pure tone average of the patients before treatment was 64.45 dB. Complete, remarkable and moderate healings were observed in 8.3%, 37.5% and 20.8% of the patients, respectively. Pure tone average didn't change with the initial treatment in 33.3% of the patients.

Conclusion: Despite of the recently published guidelines, the treatment protocols of idiopathic sudden hearing loss were not randomized. Each specialist had his protocol for the different clinical entities of sensorineural hearing loss. Prognostic factors associated with hearing improvement include mainly age, severity of initial hearing loss, duration from onset to treatment, initial speech discrimination score and initial pure tone threshold. Recovery rates could have been impacted by inadequate or insufficient treatment.

Eustachian tube function in patients with chronic tubotympanic suppurative otitis media with Eustachian tube dysfunction after tympanoplasty

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Actuality: In the treatment of chronic tubotympanic suppurative otitis media, one of the main conditions for a successful treatment is a sufficient function of the Eustachian tube (ET). Earlier, the fifth stage of ET function was considered a contraindication for tympanoplasty. The inflation-deflation test allows accurately assess the degree of dysfunction of the ET and optimize surgical tactics.

Aim of the study: To determine the dynamic changes in ET function in patients with chronic tubotympanic suppurative otitis media with ET dysfunction after tympanoplasty according to the inflation-deflation test.

Material and Methods: We examined 105 patients aged 19 to 56 years, 57 were women and 48 men. At the first- fourth grade of ET function according to inflation-deflation test, the result was interpreted as normal – patients underwent tympanoplasty without ventilation tubes (VT). At the fifth stage of ET function, the result was interpreted as abnormal (ET dysfunction) – patients underwent tympanoplasty with teflon or silicone VT. Inflation-deflation test was performed in all patients post-operatively after 3, 6, and 12 months. With ET function improvement (changing grade from fifth to first- fourth), the VT was removed.

Results and discussion: Was found that in men, the 5th grade of ET dysfunction is observed less often (37.5%) than in women (52.6%). ET function improvement in patients with teflon VT is faster than in patients with silicone VT. At the same time, restoration of the tympanic membrane leads to decrease of the fifth grade of the ET function when comparing between the third and sixth and 12th months, and also between the sixth and 12th months after surgery in both groups of men and women.

Conclusions: Tympanoplasty in patients with chronic tubotympanic suppurative otitis media improves the ET function. The inflation-deflation test is an objective method and should be the basic examining the ET in the candidate for tympanoplasty.

Surgery in vertigo

J. Magnan

Aix-Marseille University, France

Surgery in vertigo is uncommon but indication exists and represents in such specific cases the best and safe solution.

The decision making requires two prerequisites:

1. Incapacitating vertigo unresponsive to medical treatment,
 2. Strict peripheral pathology
- Therefore the main indication is: the incapacitating Meniere's disease with failure of medical or transtympanic treatment. This situation is often underestimated. The different techniques will be mentioned but the key procedure to cure such recurrent disorder is the vestibular neurectomy. Our results, on 539 patients operated between 1974 to 2014 (on a average of one case per month), demonstrate that vestibular neurectomy is the unique treatment offering no anymore vertigo attack, preserving hearing function and reducing the risk of bilateral form.
 - Endolymphatic shunt did not prove its efficiency, but balloon endolymphatic sac represents a new option in bilateral hydrops
 - Exceptional recurrent BPPV after several maneuvers could be lead to semicircular canal obliteration.
 - Rare minor syndrome with dehiscence superior canal can be operated using endoscopic procedure.
 - Finally, surgery of vertigo by vascular loop compression of the VIII cranial nerves will be shown and discussed.

The objective tool for quality of life assessment in patients with chronic otitis media: our results

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Introduction. The problem of quality of life assessment is caused by a frequent mismatch between the pattern of disease perceived by the patient and the pattern of disease, based on objective data. This situation is particularly relevant to otology, where there are several forms of chronic otitis media (COM), each of which is characterized by peculiarities of courses and outcomes. This is a widespread disease that affects, according to various sources, 65-330 million people (2% of the population) worldwide, with a greater number of cases observed mainly in developing countries. The Chronic Otitis Media Questionnaire -12 (COMQ-12) was developed initially in the UK to assess the patient-reported health-related quality of life (HRQoL) due to chronic otitis media.

The aim of this study is to determine whether this tool is applicable to the Russian population, which has a materially different healthcare system.

Material and methods: The Russian version of the COMQ-12 (RCOMQ-12) was obtained through a formal process of translation and back-translation. Some 140 patients with different forms of COM completed the RCOMQ-12 before surgical intervention and then 3 months and 1 year after that. Sixty healthy volunteers also completed the RCOMQ-12. We took into account such anamnesis data: type of previous surgery, unilateral or bilateral COM, the presence of the open mastoid cavity, smoking, concomitant nose pathology, the presence and level of sensorineural hearing loss.

Results: The main group included 140 patients: 63 men (45%) and 77 women (55%), ranging in age from 16 to 84 years. RCOMQ-12 scores ranged from 4 to 43 among all respondents. The average score was 19.61 (SD 7.97). Some 121 patients (86.4%) achieved a score of 10 or more. For the RCOMQ-12 Cronbach's alpha was equal to 0.860. We evaluated the correlation between anamnesis data and RCOMQ-12 scores. We calculated objective data that affect the patient's quality of life and satisfaction with surgery.



Conclusions: The Russian version of the COMQ-12 is found to be a reliable tool for assessment of HRQoL in patients with chronic otitis media. This study allowed us to determine the parameters that need to be considered before surgical intervention. This allows us to obtain a more complete and objective picture of the studied disease.

Contemporary management of the tinnitus patient in an interdisciplinary setting

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Tinnitus is a common disorder in adults and represents the perception of phantom sound in the absence of a corresponding external source. Most cases are caused by cochlear injury that leads to peripheral deafferentation, which results in adaptive changes in the central nervous system. Tinnitus pathophysiology is complex. There are no specific findings in the otologic examination and this condition persists after auditory nerve dissection. A common association with sensorineural hearing loss has been proved. A multidisciplinary approach is essential for diagnosis and therapy of tinnitus. The steps in tinnitus management in an interdisciplinary Tinnitus Clinic consist in the identification of an interested audiologist and of an interested psychiatrist/psychologist; comprehensive consultations involving otolaryngologists as well as interdisciplinarily-minded specialists such as dentists, otoneurologists, physiotherapists, etc. Regular monitoring of patient's status and eventual modification of the management plan is required. Otolaryngologist's perspective includes timely acquisition of basic understanding of tinnitus pathophysiology, first point of contact for many tinnitus patients apart from general practitioner/audiologist (depending on the health care system in a given country) and capability of differentiating between acute versus chronic tinnitus as well as between subjective versus objective one. Core competence for the detection of underlying otological/somatic diseases is of utmost importance. Diagnosis of tinnitus involves a detailed case history, an assessment of tinnitus severity, an otorhinolaryngologic and an audiologic examination. Diagnostic procedures should always be accompanied by empathic and insightful counseling according to the guidelines recommended by the American Academy of Otolaryngology. Pulsatile tinnitus requires specific diagnostic assessment. Further diagnostic steps depend on comorbidities. Usage of questionnaires is helpful. Causally oriented treatment of specific pathologies should be prioritized. Symptomatic treatment involves cognitive behavioural therapy, psychopharmacology (corticosteroids), hearing aids, sound therapy, and neuromodulation. Treatment of ear infections and elective ear surgery can be considered, too.

Audiological results of middle ear surgery: open versus closed tympanoplasty

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Background: There are no universally accepted opinions about the choice of surgical technique, and outcome of surgery for cholesteatoma in different age and localizations.

Methods: Prospective study of 758 patients with cholesteatoma was performed. They were divided in three age groups: children younger than nine years, adolescents aged ten to 16 years, and adults. Cholesteatoma was classified as: attic, sinus and tensa cholesteatoma. Classical canal wall up, or wall down tympanoplasty was performed in all the cases, and reoperation was done later if needed. Anatomical and functional results were followed up regularly, and evaluated three years after the operations.

Results: During postoperative course after three years retraction of neomembrane was found in 23,8% of younger children, 27,6% of adolescents, and in 9,9% of adults. Recurrent cholesteatoma were more than twice as frequent in children (19,0%) than in adults (9,4%). Reoperation was performed in 38,1% of children and in 9,4% adults. In one fourth of pediatric cholesteatoma reoperations conversion to open tympanoplasty was done. Retraction and recurrent disease were present in about 10% of attic and sinus cholesteatoma, and in 15,5% of tensa cholesteatoma.

Conclusion: Postoperative audiological results of cholesteatoma surgery in children are comparable to adults. Retraction pockets, recurrent cholesteatoma and reoperations are twice as frequent in the pediatric group than in adults. The worst anatomical and functional results are achieved in tensa cholesteatoma. The age of the patient and localization of cholesteatoma are very important factors that determine the type of surgical procedure and the results of surgery for middle ear cholesteatoma. Closed technique is better for attic and sinus cholesteatoma, while in tensa cholesteatoma opened technique seems more appropriate.

The importance of the neonatal hearing screening

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Sensorineural hearing loss is a common disease in newborn population, with a high prevalence 1-3 cases / 1000 newborns according to the data provided by NIDCD. The universal newborn hearing screening program is a reality nowadays. Currently there are audiological tests simple, non-invasive and short duration such as otoacoustic emissions – otoacoustic emissions (OEA) and automatic evoked auditory potentials AABR that allow efficient screening (99,7% negative predictive value). The aim of the paper is to highlight the factual situation of the newborn hearing screening in Oradea, Romania, to establish the importance of the risk factors for hearing loss and to analyze these risk factors. This program includes all the children born in the hospital with/without risk factors for hearing impairment. The correct application of the protocol of screening allows early detection of uni- or bilateral hearing loss enabling the early diagnosis and appropriate treatment for an improved intellectual, linguistic, emotional and social outcome.

Structural damage of the conjunctiva after UV exposure – insights by in vivo confocal microscopy

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Introduction: Ultraviolet (UV) light damage of the eye is an undeniable fact, but there is insufficient information yet about the exact mechanisms and pathological changes of the anterior eye surface and eyelids.

Methods: The goal of the study is to understand the microstructural alterations of the ocular surface associated with UV exposure, evaluate the UV protection habits, encounter eventual microstructural changes and follow their dynamics using in vivo confocal microscopy. During a period of 4 months, 50 randomly selected young subjects (100 eyes) have been examined before and after the summer season. All the subjects repeated the examination procedure in one-year time interval and served as a self-control group. Laser scanning in vivo confocal microscopy was performed as followed: nasal, temporal, superior and inferior conjunctiva; and superior lid from the conjunctival side.

Results: Analysis of the bulbar conjunctiva demonstrated characteristic cystic lesions with dark centers and bright borders, encountered only in 6 eyes (6 %) before summer season, and after the summer season their presence increased affecting 29 eyes (29%). From the affected eyes, 16 were right (RE) and 13 left (LE), however, the number of encountered cysts was very similar for both eyes (49 RE and 51 LE). The size of the cysts also increased from 12-78 μm at baseline up to 14-174 μm after the summer sun exposure. Cysts also had a specific topographic representation, with higher distribution within the interpalpebral fissure. The total area of the lesions was calculated before and after the summer sun exposure, and was enlarged by 20 times. The total affected area after sun exposure returned within the normal range in one-year time interval. The analysis of the upper lid conjunctiva revealed round lesions with dark center and bright borders with significantly increased size and number after the summer period. Total cyst area after summer increased by 5 times. The total affected area after sun exposure in these control eyes increased by 6 times after the sun exposure and returned within the normal range after one year.

Conclusion: Summer sun exposure for one season leads to subclinical, transient microstructural changes on the bulbar and palpebral conjunctiva. The eye care practitioners must pay clinical attention to the potential causative factors of ocular surface disease and educate their patients for proper sun protection.

Vestibular rehabilitation

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Vestibular rehabilitation (VR) is indispensable dimension in treatment of vestibular disorders even if it is unilateral and peripheral. For success, the disease should be in the state of sequela. While VR mostly succeeds with the peripheral disorders as well as psychological types, the response to the treatment by central vestibular disorders generally resists. The treatment is based on the recovery of central compensation with the adaptive mechanisms of vestibule-ocular and vestibule-spinal reflexes.

The cases are selected by carrying out the full videonystagmographic tests as well as video head impulse test (VHIT) and VEMP's. The state of dysfunction is evaluated and monitored by dynamic posturography. The presence of associated neurological disorders is screened by magnetic resonance imaging (MRI). The post-treatment anteroposterior somatosensorial, anteroposterior global, mediolateral visual (MLVI), and mediolateral global values and anteroposterior and mediolateral tri-



als and conditions are evaluated by dynamic posturography. Vestibular rehabilitation was effective in patients with bilateral vestibular dysfunction. As VR duration increased, so did the efficacy of the treatment.

Modified hypoglosso-facial anastomosis: techniques and results

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Background: Hypoglosso-facial anastomosis (HFA) is the only method of facial muscles reanimation in the absence of access to the proximal end of the facial nerve. This anastomosis produces very good and stable results, but has certain disadvantages associated with the intersection of the main trunk of the hypoglossal nerve. This leads to tongue hemiatrophy, impaired swallowing, articulation and chewing. To prevent these complications, jumping anastomosis is proposed, when the facial nerve is sutured with the nerve interposition to the side of the hypoglossal nerve. Another modification of classical HFA is reinnervation of the hypoglossal nerve with its descending branch.

Material and methods: During the period 1994-2015, 75 operations were performed in patients with facial paralysis in Kolomyichenko Otolaryngology Institute, of which 36 patients underwent classical HFA, 18 had jumping and 21 had a modified anastomosis. Patients' age ranged from 6 to 68 years (an average of 34.3), observation periods from 2 to 21 years (an average of 8.6). The results of restoration of the function of the facial nerve were evaluated after 2 years or more after the surgery. To assess the function of the facial nerve, three grading systems were used: Haus-Brackmann (HB), Yanagihara and May. We also evaluated the state of the tongue, the function of swallowing, articulation and chewing.

Results: On the scales of HB and May, there were no significant differences between the three methods of anastomosis, while, according to the Yanagihara scale, the results were significantly better after the modified anastomosis. Disturbance of swallowing and / or chewing was noted in 63.9%, a difficulty of articulation was noted in 33.3% of cases after classical HFA and only 4.8% after modified and 5.6% after jumping anastomosis. All patients after classical HFA had hemiatrophy of the tongue, but after modified anastomosis only in 9.5% of cases and after jumping anastomosis – in 5.6% of cases.

Conclusions: HFA anastomosis allows restore the tone of the facial muscles and the symmetry of the face at rest. Modified and jumping HFA anastomoses preserve the trophic of the tongue, while articulation, swallowing and chewing do not suffer. Unlike jumping anastomosis after a modified HFA, the tonus of the facial muscles and active movements are more fully restored.

Functional infralabyrinthine approach to the jugular foramen in type C1-C2 paragangliomas

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Introduction: Paragangliomas are benign vascular neoplasms which are often found in the jugular foramen of the skull. In most cases, the size of this pathology of the jugular foramen, when diagnosed, corresponds to types C1-C2 according to U.Fisch classification. Surgery remains the method of choice in the treatment of paragangliomas. The infratemporal fossa Type A is the classical approach. A functional impairment of the low cranial nerves, the facial nerve, hearing and equilibrium, due to the peculiarities of this approach may happen.

Methods: As distinct from the traditional technique used on type C1-C2 jugular foramen tumours, we have applied the functional infralabyrinthine approach. This approach is provided through the temporal bone with sigmoid sinus exposure. The prebulbar space is exposed retrofacially. The infralabyrinthine space is opened with the preservation of the wall of the external ear canal. This approach provides access to the jugular foramen and its exposure through the lateral and posterior walls. The infralabyrinthine area, the hypotympanum up to promontory level, the posterior tympanic synus, the area of the vertical portion of the internal carotid artery were exposed. The advantages of the above approach are as follows: 1) There is no need for facial nerve mobilization; 2) The middle ear and the labyrinth are preserved.

Results: This approach was used in 30 patients for removal of type C1-C2 glomus tumours. All the resections were total. The early postoperative period demonstrated complete preservation of cranial nerves and hearing ability.

Conclusion: Use of infralabyrinthine approach to the jugular foramen in type C1-C2 paragangliomas gives the opportunity to fully preserve the function of cranial nerves, and the labyrinth. The integrity and the function of the middle ear are also preserved. The total removal of type C1-C2 tumours and control of the affected area are possible.

Adhesive otitis media

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Retraction is a general term of medially displaced position of the tympanic membrane. It can be globally or partly. If it is not global, it may be related to only pars flaccida or pars tensa; in the latter, it may be limited to only one quadrant i.e. posterior-superior, anterior superior, or more. There are some other definitions of retraction refer to some features of retraction. For example, retraction pouche or pocket is used to define that the tympanic membrane locally displaced to medial from its normal position. Retracted tympanic membrane may be movable or not by changing the pressure in the external canal actively with pneumatic otoscopy or passively in the middle ear by Valsalva or Toynbee maneuvers. If it moves, it is mobile otherwise it is fixed. Adhesion is a term of advanced stage of retraction and defines the condition of retracted tympanic membrane touches and adheres to the medial element like promontorium or long process of the incus, which is normally not. It is the last stage of the continuing process of inflammatory process in the middle ear. Adhesive otitis media is the penultimate stage of long-lasting inflammatory process in the middle ear; otitis media with effusion at the beginning point and cholesteatoma at the end. It is a sequela of otitis media, which causes conductive type hearing loss. Tympanic membrane retraction is very frequently seen ear pathology in daily practice. It has a clinical importance due to it creates cholesteatoma risk and causes hearing loss by destructing functional elements and/or changing middle ear impedance. Many classifications have been proposed for the tympanic membrane retraction. In a general view, authors, in their classifications, have tried to draw attention to some features of retraction such as mobility by Valsalva or Toynbee maneuvers, or pneumatic otoscopy, visibility of boundaries, debris accumulation in or edge of retraction pocket, perforation, otorrhea and cholesteatoma. So, those features of retraction are very important for the prognosis and choice of treatment. Sade, in 1993, classified retraction into four stages: Stage 1: slightly retraction, Stage 2: retraction, Stage 3: atelectasis, Stage 4. adhesion. He added one more stage a few years later: Stage 5: perforation. According to this commonly used classification, tympanic membrane retraction in adhesive otitis media is in advanced stage (stage 4). There is also severe and chronic problem of middle ear ventilation. As previously mentioned before, the main reason of retraction, adhesion and cholesteatoma formation is always pre-existing otitis media with effusion. The surgeon should keep in their minds that some important alterations exist in the middle ear. Structure of the tympanic membrane is impaired and middle ear mucosa is not normal in adhesive otitis media. Those ears may represent infection, ossicular erosion, cholesteatoma, hearing loss and/or tympanic membrane perforation. Medical or surgical treatment may be used for those ears. Antibiotics may be helpful if there is infection. Nevertheless, medical treatment may have a very limited role in the general treatment strategy for adhesive otitis media. Surgical treatment is the main strategy for this sequel of otitis media. Impaired structure of the tympanic membrane, cholesteatoma, if it exists, conductive hearing loss even infection resistant to medical treatment can be treated surgically. Steps of preoperative evaluation are taking a detailed history, careful physical examination including head and neck, cardiovascular and pulmonary systems, otoscopy, otoendoscopy, otomicroscopy; audiometry, and imaging studies. There is not a specific surgical treatment modality for adhesive otitis media. Suitable tympanoplasty techniques are used for reconstruction of impaired tympanic membrane and eroded ossicular chain. If cholesteatoma exists, excision by using convenient techniques of tympanomastoid surgery is preferable. Classically term of cartilage tympanoplasty is used for reconstructive procedures for adhesive otitis media treatment because of using cartilage as the reconstructive material. Cartilage is preferred material for reconstruction because risks of reperforation and infection is lower due to metabolism of cartilage is lower/slower, and it resists to tendency of retraction due to its hardness and thickness.

Cartilage is used in different forms like island, composite, palisade, block or mosaic for the reconstruction of the tympanic membrane. Results of surgical treatment depend on some factors such as aeration of the middle ear and presence of cholesteatoma. Unfortunately, aeration expectation of the middle ear is not high because middle ear mucosa and Eustachian tube function have already been impaired in those ears. The other technical difficulty is dissecting adhesive segment of the tympanic membrane from the medial element. As it is well known, results of ossicular reconstruction in an ear totally depend on the aeration of the middle ear in the postoperative period. Dressing and protection is important for postoperative care. Antibiotics are used if infection present. Analgesics may be ordered if the patient is not comfortable due to pain. It is not a rule, but Valsalva exercises may be suggested the patients starting from postoperative 3rd week. First audiometric evaluation is performed at the 6th week of surgery. Complications of surgical treatment are effusion in the middle ear, re-retraction / adhesion, infection, granulation, re-perforation, external ear canal stenosis, and hearing loss.

Use of cartilage in ear surgery

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Use of cartilage in ear surgery has a long story. First reported use of cartilage in ear surgery was in 1958 by Jansen for ossicular chain reconstruction. Just a few years later, in 1963 Salen and Jansen reported the first usage of cartilage for tympanic



membrane reconstruction. Then during the last two decades cartilage usage in ear surgery has gradually become more and more popular by especially studies of Heermann et al. Cartilage, as a reconstruction material, can be used different reconstructive procedures in ear surgery. Structural and metabolic features of cartilage make itself desirable for reconstructive ear surgery and mastoid obliteration. Metabolism of cartilage is lower and slower than the other alternative reconstruction materials. It is also strong and thick enough. Those metabolic and structural characteristics of cartilage provide some advantages such as lower re-perforation and infection risk and more resistance to retraction tendency in ear surgery. Preventing retraction, and reducing re-perforation and prosthesis extrusion risks make cartilage itself a desirable material for tympanic membrane reconstruction. Cartilage may also be used in ossicular chain reconstruction to reduce risk of prosthesis extrusion and to complete continuity of the ossicular chain. There are several materials described for reconstruction or restoration of the external ear canal. Cartilage is also the most popular material for those indications. Not for only reconstructive procedures, but also for obliteration of either open or closed mastoid cavities is the other indication for use of cartilage in ear surgery.

Cartilage Harvesting

Cartilage can be harvested from the auricle or nasal septum. Auricle is always first choice. Depending on the necessity of amount of cartilage material, it can be obtained from the tragus or concha and cyma or both. Author personally prefers the tragus as donor site for reconstructive procedures, and concha and cyma for obliteration. Tragal cartilage is a very useful material for reconstruction due to suitable thickness, smoothness and diameters. Concha provides enough amount of cartilage material for oblitative procedures. If amount of cartilage in the auricle on the operated side is not enough, the surgeon may take it from the other auricle or nasal septum. Cartilage harvesting from the tragus is a very simple procedure. Just for more acceptable cosmetic result, skin incision may be done 1 mm posterior to the free edge of the tragus. In this way, skin incision scar is not seen from anterior view. Dissection is easier on the posterior surface than on the anterior. So, if the surgeon needs the tragal cartilage with only one side perichondrium, anterior dissection between anterior surface perichondrium and cartilage, which is a very easy procedure, is preferable. If all tragal cartilage is not necessary, 1 mm free edge segment of the cartilage is left in place to prevent tragal collapse postoperatively. Cartilage harvesting procedure, regardless of from tragal, conchal or nasal septal, has some other potential complications, rather than cosmetic deformity or hematoma, such as infection, bleeding, crumbling the graft away.

Sculpturing Cartilage

Cartilage taken from the tragus is prepared and sculptured according to the technique and intended purpose. Several techniques have been described in literature regarding cartilage usage for reconstructive ear surgery. Palisade, island, block, shield, butterfly are some of those techniques for tympanic membrane reconstruction. Double block, triple block, long and short columellae are for ossicular chain reconstruction.

Use of Cartilage in Tympanic Membrane Reconstruction

The main reasons of cartilage usage in tympanic membrane reconstruction are to prevent postoperative retraction or to reduce the risks of re-perforation or alloplastic prosthesis extrusion. A lot of materials have been used for tympanic membrane reconstruction in literature. Author mostly prefers to use perichondrium for tympanic membrane reconstruction. Nevertheless, cartilage is the second most frequently used material. The other materials are temporalis fascia, chondro-perichondrial composite graft, vein, lyophilized dura, fat, and periosteum. As it is mentioned above, cartilage provides some advantages to the surgeon. As a reconstruction material, cartilage is more resistant to retraction in the postoperative period than other optional materials. If the surgeon expects postoperative retraction, considering the Eustachian function and middle ear mucosal damage, cartilage is the material of choice. In fact, the author has never seen re-perforation with perichondrium, it is clear that cartilage is stronger material than perichondrium or other alternative materials for reconstruction of the tympanic membrane. In spite of not giving a guarantee, cartilage over an alloplastic prosthesis serves a good prevention against extrusion. For just this advantage, cartilage may be chosen as a material of tympanic membrane reconstruction in such cases. According to these explanations, cartilage may be chosen as a graft material for tympanic membrane reconstruction in tympanic membrane retraction, cholesteatoma and revision cases, and also ears with high reoperation risk. Many techniques have been described in literature for cartilage tympanoplasty. Cartilage can be used as an island graft, cartilage block, palisade, shield or butterfly in tympanic membrane reconstruction. Surgeons will choose one of these techniques according to their experience, surgical philosophy and also ear pathology. Disadvantages of the cartilage are opacity of the graft making difficult to get information about the condition in the tympanic cavity postoperatively. Rigidity is another issue. This has been proposed that it is a reason for lower functional gain. Lastly harvesting and handling have been proposed as a time consuming procedure.

Use of Cartilage in Ossicular Chain Reconstruction

To reduce the risk of prosthesis extrusion may be a reason to use cartilage in ossiculoplasty. Cartilage can be used like prosthesis or reshaped ossicle to complete the ossicular chain. A piece of free cartilage may be put over the prosthesis and under the tympanic membrane or the graft to prevent direct contact between prosthesis and the tympanic membrane. Sometimes this cartilage piece may displace or migrate from its place in the early or late postoperative period. Full thickness cartilage can be sutured to top of the prosthesis to prevent such migration or displacement. If the tympanic membrane also has to be reconstructed at the same stage, cartilage may be chosen for reconstruction of the tympanic membrane. Cartilage plays the same role as the free piece of cartilage to prevent direct contact in such condition. Different graft alternatives to reconstruct the ossicular chain have been reported. Ossicle, bone cement, titanium and some other metals, cortical bone, and metal-

hydroxylapatite combinations are some of them. In addition of these, cartilage can be reshaped as prosthesis to provide continuity of the ossicular chain in the presence of ossicular erosion either partial or complete. For example, cartilage can be reshaped similar to Appelbaum prosthesis to reconstruct lenticular process defect or partial incus replacement prosthesis for long process defects. Author used to use cartilage for those indications in the early years of his career with only short-term success. Nowadays he prefers other materials and techniques for those indications. Luetje has described double and triple cartilage block techniques. It works if it is used in convenient cases. Author uses some kind of modification of this technique in certain cases. According to the defect, he may sutured two or three pieces of cartilage in gradually increasing diameters to each other to create a kind of conic shaped short columella TORP to put over intact and mobile footplate in the absence of stapes superstructure. In the presence of shallow tympanic cavity at the end of an open cavity surgery, this technique is useful. The author may also create an acetabulum on a piece of tragal cartilage and place it over the stapes head like a PORP if there is only intact and mobile stapes in the tympanic cavity. If a second look operation is planned in extensive cholesteatoma cases, this may be a good alternative to PORP.

Use of Cartilage in External Ear Canal Reconstruction

In the presence of a defect on the bony external ear canal, cartilage is a good material for reconstruction. Bony external canal can be destructed by cholesteatoma or sometimes by a surgeon during drilling. In the presence of bony external canal destruction, reconstruction of the canal is obligatory to prevent cholesteatoma. Many graft materials such as titanium, perichondrium, fascia, bone cement, bone-pate, cortical bone, have been used for this procedures. Cartilage is the most useful material in the list. Cartilage reconstruction of the canal may prevent retraction of the canal skin, which is very risky for cholesteatoma development or recurrence. Keeping a closed cavity or creating a closed cavity after canal wall-down procedure is possible by this reconstruction.

Use of Cartilage in Mastoid Obliteration

As it is well known, obliteration is a quite commonly used procedure in tympanomastoid surgery. Cartilage is considered as a best option as obliteration material in both closed and open cavities. Some authors believe that closed cavity is not functional and may pose a risk for retraction and even cholesteatoma postoperatively. On the basis of this opinion, they obliterate closed cavities by using some materials like fat, calcium phosphate, silicon block, synthetic bone graft, bioactive glass, hydroxyapatite, cortical bone, different flaps, and cartilage. Classically obliteration is used to reduce mastoid cavity volume to avoid postoperative cavity problems in open cavities. Cartilage is mostly used material for all kind of obliteration procedures. Depending on the available amount of cartilage, cavity can be obliterated completely or partially if complete obliteration is not possible and/or necessary. The technique is very simple. The cavity is filled with cartilage pieces.

Possibilities for application of the social corporate responsibility in pharmaceutical companies offering products in the field of otology and neuro-otology in Bulgaria

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Introduction: Social responsibility is an element of the corporate culture that requires fulfillment of voluntary commitments by companies, in which private gains and private corporate interests take second place and a new vision of corporate values is established. Corporate social responsibility means companies to work voluntarily, without being forced by law, to achieve social and environmental goals in their day-to-day business activities. The purpose of the article is to present good international practices and opportunities for application of corporate social responsibility when implementing the business strategies of pharmaceutical companies, offering products in the field of otology and neuro-otology of the Bulgarian pharmaceutical market.

Material and Methods: The study includes theoretical considerations and qualitative research methods – in-depth interviews with managers of successful pharmaceutical companies operating on the Bulgarian pharmaceutical market.

Results and Discussion: One of the most important documents defining the scope and the specificities of the corporate social responsibility in the European Union, including in the pharmaceutical sector, is the European Parliament resolution on the corporate social responsibility, promoting society's interests and a route to sustainable and inclusive recovery. The comparative review of the examples of social corporate responsibility in the business strategies of pharmaceutical companies in Bulgaria, offering products in the field of otology and neuro-otology, complies with the principles set out in these international documents and official reports of the European Parliament, the European Commission, the World Health Organization and the United Nations.

Conclusions: When talking about strategies for social corporate responsibility, we need to keep in mind that a key stakeholder is also the consumer (patient). In this respect, it is necessary that pharmaceutical companies operating in Bulgaria,



including of products in the field of otology and neuro-otology, to include activities aimed at supporting programs related to the strengthening of patients' organizations and the opportunities for their voice to be heard. Furthermore, it is necessary to strengthen and expand the capacity of the non-governmental organizations and consumer organizations to conduct independent research on products and services and to bring the results to the attention of broad categories of consumers by providing resources and methodological assistance for such research. On a broader scale, work is being done to extend consumer organizations' capabilities to lodge a collective claims against unfair producers, traders and monopolists by using legal aid to strengthen their position in the social dialogue; development of a national campaign to raise awareness among consumers, patients and their relatives about the benefits of the social responsibility activities and promotion of sustainable consumption patterns to improve the health and quality of life of people with vestibular disorders.

The role of the international partnerships for transfer of knowledge and experience in the field of otology and neuro-otology

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Introduction: The diagnostics, the innovative treatment methods and the maintenance of good quality of life for people with vestibular disorders are a priority in the work of the academic and medical teams in the field of otology and neuro-otology in Bulgaria and worldwide. In this regard, the process of acquisition, exchange and application of knowledge, experience and results of scientific research at national and international level is important. Thanks to their functions to conduct training of future and current medical professionals as well as to carry out scientific and applied research, universities are an important part of the healthcare ecosystem, in particular in the field of otology and neuro-otology. The effectiveness and the results are increasing through international teamwork and partnerships, and the main goal is to achieve good health and complex care for people with vestibular disorders. The objective of this article is to present examples of good practices for international partnerships from the experience of the Medical University of Varna and the International Black Sea Association of Otology and Neuro-otology for application of innovative diagnostic, treatment and training methods in this field.

Material and Methods: This study includes theoretical statements and practical case studies on the establishment, activation and sustainable development of international partnerships in the field of Otology and Neuro-otology.

Results and Discussion: Examples of international exchanges between academic partners are considered with regard to training and knowledge transfer, and examples of complex and innovative practices in different international teams are presented in relation to the medical care for patients with vestibular disorders.

Conclusions: The synergy of the international partnerships at the academic, scientific and practical level is an important factor for the development of the contemporary otology and neuro-otology. It leads to a faster adoption of new treatment methods, more effective outcomes in the processes of training and practice and a better patients' access to complex healthcare. For the proper, well-timed diagnosis and treatment of vestibular disorders, collaboration between among various specialists such as otorhinolaryngologists, neurologists, cardiologists, psychiatrists, and psychologists is needed. The international partnerships are an active field for joint multidisciplinary work and for successful solution of complex cases and innovations.

Cochlear implantation in the ossified cochlea

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Ossification of the cochlea in candidates for cochlear implantation is often. During the last four years, we have treated two patients with ossified cochlea. Herewith we present our surgical experience in these cases with cochlear ossification. Clinical case reports demonstrate that results are often similar to those expected for implantation of the non-ossified cochlea, particularly when the electrode insertion is, in principle, possible.

Subjective and objective assessment of patients with new couplers of the Vibrant Soundbridge system

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New universal couplers for the Vibrant Soundbridge system are applied in hearing disorders of various etiology, congenital and acquired, in pediatric and adult patients. Depending on the ear pathology and patient's status, the Floating Mass Transducer (FMT) is attached in different placements. In case of sensorineural hearing loss, the FMT is usually attached either to short, or to long process of the incus whereas in case of conductive or mixed hearing loss, the couplers are either attached to the stapes head, or are fixed on the round window. The functional results of new Vibrant Soundbridge (VSB) new couplers implanted in 10 patients (aged 12-67 years) between 2014 and 2017 in the World Hearing Center, Kajetany, Poland, were analyzed. The patients had different hearing losses ranging from mild to profound and of various etiology. Most often, the coupler placed on the short process of the incus was used. Audiological assessment was conducted according to the following schedule: appointment 1 (preoperatively), system activation (6-8 weeks postoperatively), appointment 3 (5-7 months postoperatively), and appointment 4 (11-13 months postoperatively). The patients were thoroughly examined with pure-tone audiometry, free field pure-tone audiometry, speech audiometry and free field speech audiometry. Vibrogram in situ was performed in every patient. The sound was presented straight from the device. The results from ABHAB questionnaire filled-in by the patients prior to and after operation were analyzed. Based on the results of the free field pure-tone audiometry, the authors confirmed a significant improvement after the procedure of VSB implantation when compared to the preoperative results. It was also confirmed that the patients had better speech understanding using the speech processor. The postoperative pure-tone audiometry results (wearing headphones) and Vibrograms in the implanted ear were usually stable in the observed frequencies that allowed the statement that the implant fixation was correct and not displaced. The analysis of these patients indicates that VSB system considerably improves patient's auditory skills in case of middle ear congenital hearing loss or coexisting external and middle ear defects if classic hearing aids can't be used. Based on the audiological results and questionnaire assessments it is concluded that there is a noticeable gain from VSB implant application.

Dizziness and epileptic seizures

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Objective: Reviewing the correlation between vertigo and epileptic seizures and definition of the term of 'epileptic seizures'.

Discussion: From ancient times dizziness and epileptic seizures have been linked conceptually and diagnostically. Today it is clear that there are many common associations between dizziness and epileptic seizures. The epileptic discharges in the area of the sensory representation in the vestibular system which representation is localized in the area of sulcus interparietalis and the posterior parts of gyrus temporalis superior can lead to vertigo. The vertigo can remain an isolated phenomenon or it will become a first symptom of a psychomotor (complex partial) epileptic seizure, sometimes with a second generalization to a generalized tonic-clonic seizure. Even though the dizziness has been recognized as a manifestation by Jackson and Growers more than 100 years ago, the possibility of short episodes of dizziness which come from epilepsy hadn't been recognized. Today it is well known that epilepsy is an important reason for a short dizziness. The epileptic vertigo is not a rare form of partial epileptic seizures as a consequence of the past epileptic activity of the cortex whereat the vestibular system is located: parietal, temporal and frontal cortex. The epileptic vertigo is a diagnostic problem when the patient does not have symptoms of an epileptic seizure, basically there are not convulsions, psychomotor symptoms or spasmodic characteristics of the classical partial or a generalized fit. The most important diagnostic tests are EEG and MRI of the brain. Vestibular epilepsy is diagnosed with abnormal EEG. Though many healthy individuals have got slightly abnormal EEG tests, which tests depend on the functional status of the body. The abnormal EEG might be a main criterion for the diagnostic outcome. In many patients' cases there are registered abnormal temporal or bi temporal focal points with sharp or slow waves whereat in some cases they can be associated with generalized discharges.



Conclusion: The correlation between vertigo and epilepsy which had been known for centuries, today it has been incorrect interpreted and debated. Within last few years this correlation has been established with the beginning of seizures in the posterior temporal neo cortex, temporo-parietal region and also seizures which begin in the frontal area where upon there are many well registered examples. Modern conceptions regarding the links between vertigo and epileptic seizures give to the term 'epileptic vertigo' much more different meaning than the simple correlation between vertigo symptoms and epilepsy. Today this is brought in for a diagnostic and a physiology discussion by a point of view of the changeable medical and social conception of both diseases.

Tinnitus – modern concepts and therapy

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Aim: Presenting modern neurophysiological concepts for diagnosis and treatment of tinnitus

Discussion: Tinnitus is defined as a subjective feeling of hearing sounds without external sound stimulation. So far there is little knowledge of the causes that lead to the occurrence of tinnitus and the therapy is unclear and strictly individual. The pathophysiological theories vary from a cochlear lesion on the synaptic level to an increased spontaneous activity of the central auditory pathways and the auditory cortex. It should not be forgotten that tinnitus can be generated at any part of the hearing system from the ear to the CNS and is subjected to modification from any of the brain structures. The patients with tinnitus and normal hearing present with increased auditory sensitivity due to auditory cortex hyperactivity. In patients with tinnitus and hearing loss, the frequency of tinnitus often corresponds to the frequency of the hearing loss. The hyperacusis is a common complaint from these patients and this suggests that both symptoms have a common origin. The reduced sensory information from the cochlea and the auditory nerve leads to a resetting of the CNS and from there to abnormally increased neuronal activity, quick fire rates and rise of the neuronal asynchronization. Abnormal EEG activity in the central auditory pathways has been reported in experimental animals after hearing trauma and later confirmed in patients with tinnitus. These deviations can be explained through the mechanisms of the homeostatic plasticity and reorganization at different levels of the auditory pathways with the aim to reduce the impairment of the auditory functions. The increased brain activity in patients with tinnitus is demonstrated by γ -activity in the auditory cortex on the EEG. The occurrence of this γ -activity is believed to be the result of inhibition incapability of the auditory cortex and leads to decreased α -activity. The assessment of patients with tinnitus begins with an interview that consists of guiding questions to help the specialist understand the characteristics of the patient's tinnitus. The interview is followed by audiological tests and additional consultations and examinations are performed when needed. The influence of tinnitus on the quality of life is typically assessed through questionnaires that contain similar but different questions for optimal objectivity of the results. The most commonly used tests are the Tinnitus Handicap Inventory, the questionnaire of Goebel & Hiller, the Hyperacusis questionnaire and others. The usage of validated questionnaires for clinical assessment of patients with tinnitus allows objectively following the patient's condition in the course of treatment.

Conclusion: Comparing the results from preliminary chosen questionnaires with the data from neurophysiological examinations is from significant importance in the making of a medical diagnosis and a therapeutic strategy in patients with tinnitus. After the high penetration of the rTMS for the focal modulation of the cortical activity, it is accepted that it can influence the tinnitus-related abnormal neuronal activity and thus change the patient's perception of tinnitus. The low-frequency rTMS is applied in order to reduce tinnitus through reducing the hyperactivity in the auditory cortex.

Cartilage rim augmented fascia tympanoplasty (CRAFT): An effective composite graft model over temporalis fascia tympanoplasty

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Objectives: To validate a newly introduced cartilage rim augmented temporalis fascia tympanoplasty technique by statistically comparing it with the morphological and audiological outcomes of traditional temporalis fascia tympanoplasty.

Methods: A Prospective analytical study was conducted on 115 patients who underwent tympanoplasty during the period between 2013 and 2015. Some 58 patients were enrolled in the temporalis fascia tympanoplasty group and 57 were subjected to cartilage rim augmented fascia tympanoplasty.

Results: In the temporalis fascia group, the grafts take up was 70%, whereas in cartilage fascia group, the healing of graft achieved in 94.7% of the cases. In those with normal ossicular chain, the post-operative air bone gap was within 20 dB in 92.6% of the cases in the cartilage fascia group, whereas, in temporalis fascia, it was 70% which was statistically significant.

Among the ossicular defective cases, in the cartilage fascia group, the post-operative air bone gap was 69.2% as against 57.1% in temporalis fascia group.

Conclusion: The cartilage rim augmented temporalis fascia tympanoplasty has definite advantage over the temporalis fascia technique in terms of superior graft take up and statistically significant hearing gain in those with normal ossicular mobility.

Surgical management of chronic rhinosinusitis. An analytical review

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The modern opinion of chronic rhinosinusitis (CRS) treatment is stated in the article from a position of evidence medicine. The review of studies concerning the medical therapy of CRS and evidence for surgery management is given. The endoscopic sinus surgery is widely used today in CRS treatment, however, recent investigations show that FESS doesn't warrant the absolute recovery. A comprehensive treatment paradigm should entail medical therapy to control inflammation and infection and targeted surgery when indicated in medically recalcitrant cases. Surgery does not represent a cure to CRS but rather one key intervention in the overall management paradigm of CRS.

Endoscopic ear surgery

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After the introduction of the operation microscope into middle ear surgery in the fifties of the last century, microscopic surgery was successfully applied for the different operations in the temporal bone and the adjacent skull base. Using the microscope, the surgeon has a three dimensional view to the operation site, may apply a stepless amplification and use both hands for surgical manipulations. However, the microscope only provides a straight ahead view. To visualize hidden areas such as the sinus tympani or the antrum region, the covering bone (canal wall, attic wall etc.) has to be removed. To reduce the trauma of access and to improve the angle of view into anatomically hidden areas inside the cavum tympani and the mastoid, endoscopic techniques are increasingly used and refined for a few years. Besides extra thin endoscopes, special instruments with integrated suction have been developed for one hand surgery. In the Bochum Department of Otorhinolaryngology, slimline endoscopes are used in addition to the microscope to completely inspect operation sites e.g. after cholesteatoma removal.

Different surgeons such as Panetti or Presutti have changed their operation technique to exclusive endoscopical procedures e.g. in otosclerosis or certain cases of cholesteatoma surgery. They developed the terms 'otoendoscopy' or 'EES (endoscopic ear surgery)'. In the present lecture, I will describe the different techniques of endoscopic ear surgery and discuss advantages and disadvantages of these procedures.

Facial nerve palsy caused by viruses and bacteria affecting the intratemporal course of the facial nerve – case reports. Immunologic aspects

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Introduction: Facial Nerve Palsy (FNP) is caused by certain types of viruses and bacteria, the infection with which lead to acute and chronic otitis media (with or without cholesteatoma) with different pathophysiologic mechanisms including changes in the number or function of the lymphocyte populations and subpopulations. We analyze FNP case reports that has occurred after an affection of the intratemporal course of the facial nerve. The facial deformation, caused by FNP, is an alarming and a worrying symptom that requires an immediate examination of the patient, discovering the type and the cause of the paralysis, as well as choosing an appropriate treatment and immunotherapy.

Aim: Based on our own experience and literature data, we present our clinical behavior in FNP cases. In the future, we want to develop an assessment of the preoperative risk by using the following criteria: for how many years has the ear been affect-



ed, the type of the ear discharge (smelly or not), the treatment that has been conducted, the result from the treatment, previous surgical interventions, appearance of vertigo and nausea, to explore the levels of lymphocyte populations and subpopulations in peripheral blood, common serum immunoglobulin classes and the tests made up to the moment of the paralysis.

Material and methods: We present 9 patients with otitis media that has progressed to FNP. To diagnose the FNP we used the following methods: otoscopy, audiometry, microbiology, preoperative and postoperative EMG, CT scan of the mastoid, pyramis, the middle and posterior cranial fossa, turbidimetry for serum levels of common immunoglobulins and flow cytometry of blood sample. While performing the otologic surgery, we used IOFNM, with which we identified the nerve and which helped in the removal of the granulations or the cholesteatoma (if any dehiscence or erosion of the facial canal was present). In three of the patients, one with Bell's palsy, one with a Herpes zoster oticus infection, and one with CSOM (who denied operative treatment), medicamentous treatment was conducted. Four of the patients were operated depending on the pathologic process in the middle ear (two of them were treated with CWU and the other two were treated with CWD). One of the patients developed a FNP in the other, non-operated ear, that required operative treatment. Fresh venous blood was drawn into sodium-heparin tubes and the results were obtained within 2 hours. Leukocytes were analyzed by using a dual-laser FACS Calibur cytometer (Becton Dickinson, Heidelberg, Germany) and Cell Quest Pro software (Becton Dickinson). Briefly, blood cells were stained with fluorescence-conjugated antibodies (FITC and PE). After lysis of erythrocytes (Lysis buffer; Becton Dickinson) and two washes, stained PBMC were re-suspended and fixed with CellFIX (BD Biosciences). Ten thousands of lymphocytes were collected in a forward scatter/side scatter (FSC/SSC) lymphocyte gate and saved together with the monocytes and granulocytes. Data is presented as a percentage of the lymphocyte gate. The cytometer was calibrated daily with appropriate single-stained samples for setting compensation and acquired data was analyzed by FACSCComp software©2007 Becton Dickinson. Fluorescence conjugated antibodies by Becton Dickinson Pharmingen™ were used to identify cell populations CD3 T-lymphocytes, CD19 B-cells, CD8 T-cytotoxic, CD4 T-helpers and CD3/CD16+56 NK-cells.

Results: The full recovery of facial nerve function in our clinical cases demonstrates that the facial nerve damage corresponded to first to second degree according to Sunderland and mild to moderate facial dysfunction with following recovery according to House Brackmann facial grading system. In terms of immunological status was observed significant deviations from the reference values in patients with Bell's palsy. At the time of recording was decreased total T-lymphocytes, T-cytotoxic lymphocytes, B lymphocytes and increased NK cells refer to changes caused by viral infection and requirement for immunostimulating therapy. These degrees of facial nerve damage were identified preoperatively and postoperatively with EMG, thus confirming our treatment choice.

Conclusions: The use of modern diagnostic methods contributes for the specification of the type and reason of FNP occurrence. The cell-mediated and humoral immunity play an important role in protection against viruses and bacteria. Contemporary immunological laboratory tests should be not only the diagnostic tool but also define appropriate administration of immunotherapeutic agents in the course of treatment. Depending on the reasons of occurrence, there are certain types of nerve injury: neuropraxia, axontemesis, neurontemesis. The tympanic segment и SGA of the intratemporal course of the facial nerve are the most vulnerable structures in the middle ear during otologic surgery. Yester et al. have found 83% dehiscent facial canal in patients with facial paralysis due to chronic otitis media, with the most common sites being at the second genu and the horizontal portion. The incidence of iatrogenic facial nerve injury is reported as 0.6- 3.6 % in all otologic surgical procedures, and increases up to 4-10% in revision surgery. In these cases, the IOFNM method is useful. It can contribute in 93% of the cases for the surgical anatomic identification, which helps for the prevention of iatrogenic facial nerve injury.

Key words: intratemporal course of the facial nerve, congenital dehiscence, facial nerve palsy, IOFNM, immunotherapy.

Дехисценция на преден полуокръжен канал (SSCD syndrome) – съвременна диагноза и лечение

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Дехисценцията на предния полуокръжен канал (SSCD, superior semicircular canal syndrome) е сравнително нова нозологична единица, дефинирана за първи път от Minor et al. (1998). Част от симптоматиката обаче е добре позната на специалистите като симптом на Тулио. Въпреки това при определянето на това заболяване съществуват сериозни диагностични затруднения. През последните няколко години в практиката се въведоха нови методи за диагноза и лечение на това заболяване. Представени са резултатите от 5 пациенти, изследвани и лекувани в клиниката в рамките на последната година. Диагнозата е поставена въз основа на рутинни отоневрологични и аудиометрични тестове и регистрация на шийни и окуларни VEMP's, а след това е верифицирана с помощта на КТ с висока резолюция – 0,625 мм. Дискутирани са резултатите от VEMP-тестовете, като се отбелязва високата диагностична информативност на тези проби. На двама от пациентите в клиниката е приложено най-новото и щадящо лечение – оклузия на кръглото прозорче. Докладваме предварителните резултати след хирургичното лечение.

Active middle ear implants for the rehabilitation of patients with sensorineural, mixed and conductive hearing losses – long term experience after 10 years

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Introduction: The Vibrant Soundbridge offers an alternative treatment option for patients suffering from sensorineural, conductive or mixed hearing loss. The advantages over traditional hearing aids in sensorineural hearing loss have been demonstrated in numerous clinical studies and include improved sound quality without distortion, high amplification without feedback or occlusion, very good speech understanding even in situations with background noise, and improved comfort. In conductive or mixed hearing losses, the active floating mass transducer (FMT) is positioned in direct contact with the inner ear bypassing the external ear canal and the middle ear.

Material and Methods: We report about our experience with the Vibrant Soundbridge Implant program after 10 years of personal experience. Altogether 275 patients suffering from sensorineural and mixed hearing losses were treated so far and implanted by the first author. The FMT was placed in on the long process of the incus in sensorineural hearing losses, on the head of the stapes or on the round window in mixed hearing losses. New couplers have been used in order to make surgery more easy and feasible. The placement of the FMT depends on the grade of the hearing loss, on the pathology and the anatomy of the patients. The quality of the coupling of the FMT to the ossicular chain or to the inner ear is evaluated based either on comparative reverse transfer function (RTF) or on electrocochleography measurements. Both measurements will be presented in the lecture.

Results: In 273 cases, residual hearing was preserved indicating that the surgical techniques are safe. Surgical techniques and audiological results under headphone and in free field in the unaided and aided condition with Vibrant Soundbridge of all activated patients are presented.

Conclusion: The Vibrant Soundbridge represents an innovative treatment option for sensorineural, conductive and mixed hearing losses. Especially for pathologies that are difficult to treat, issues with the reconstruction of the middle ear can be solved by directly applying mechanical energy to the inner ear. Intraoperative measurements like the reverse transfer function help the surgeon to achieve proper audiological postoperative results.

Management of acute otitis media with purulent intracranial complications

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Changes in approaches to surgical treatment of purulent intracranial complications (meningitis, brain abscess, and ventriculitis) combined with acute otitis media are driven by emergence of such complications not only during purulent but also during non-purulent inflammation in the ear. Enlarged mastoidectomy combined with exposure of the dura and sinus often loses its actuality. Positive results of treatment with intensive medical therapy has proven, and in doubtful cases – diagnostic antrotomy or mastoidotomy. Both CT scan and MRI exclude necessity of cerebrum puncture of infected zone through undamaged dura and support neurosurgical approach. According to our clinical study, positive treatment results for patients suffering from acute otitis media combined with purulent intracranial diseases can be achieved: in 61% of cases with non-purulent (mostly viral) disease and in 29% – with purulent disease without any surgeries. In 44% of purulent inflammation cases, processes are formed simultaneously in the cranial cavity, in parallel, rather than as a result of acute otitis media. They should be called combined processes.

Piquant situations in ossiculoplasty – how i do it!

V. Honnurappa

Principles of Hearing Reconstruction: Tympanic membrane being the most important contributor for sound transmission, it should be reconstructed as near as possible when healed with free movements.

Requirements for Primary Ossiculoplasty:

- 1) Presence of normal or minimally hypertrophied mucosa
- 2) Patent Eustachian tube
- 3) Mobile stapes footplate

Primary or Staged Ossiculoplasty?



Grafts used for ossicular reconstruction:

- ◆ Autograft/Allografts
- ◆ Remnant Incus
- ◆ Malleus
- ◆ Septal Spur cartilage and other materials

Septal Spur cartilage is present along the floor where the cartilage flares up over maxillary crest. It is harvested in septoplasty surgery. Cartilage is preserved in 70% alcohol or autograft.

The objective of this presentation is understanding the long term results of Ossiculoplasty using Septal Spur Cartilage and Demonstrating long term viability.

The use of self stabilizing septal spur cartilage for middle ear reconstruction brings several advantages, it can be sculptured into an appropriate shape and size and has no extrusion rate.

Stable hearing with time tested results. I am using septal spur cartilage since last 25 years without any failure or problems.

Present results give evidence that sculptured septal spur cartilage is capable of reaching two major goals of every Ossiculoplasty – 1) a satisfactory hearing gain and 2) Stability.

Creutzfeldt-Jacob disease or H.I.V. have never been reported in any literature after transplantation of Autograft. Biomaterials known for high extrusion rates and are expensive. Comparative Histopathological study of fresh and revision case cartilage shows same number of Chondrocytes with nucleus. There is no risk of extrusion and it is cost effective.

Based on this I recommend this type of reconstruction for all types of ossiculoplasty.

Temporal bone dissection approaches to lateral skull base

V. Honnurappa

Understanding Skull Base Surgery:

The key to study lateral skull base surgery is in understanding the classification

The lateral skull base approaches are classified based on two criteria:

- 1) The location of the target lesion eg. IAC, CP angle, Clivus, Petrous Apex, Jugular bulb etc. Generally chapters in skull base textbooks are divided based on the location of the target lesion.
- 2) The route taken by the approach in relation to the otic capsule.

When the route goes through the otic capsule the approaches are- (Hearing preservation is not feasible)

- 1) Translabyrinthine approach – The SCC and vestibule are breached. The cochlea is not drilled though the function is lost.
- 2) Transcochlear approach – In addition, cochlea is breached this approach involves posterior transposition of facial nerve.
- 3) Transotic approach – The cochlea, vestibule and SCC are drilled without transposing the facial nerve.

The lateral skull base approach may take route avoiding breach of otic capsule (hearing preservation surgery)

- 1) Superior to otic capsule – middle cranial fossa approach
- 2) Posterior to otic capsule – retrolabyrinthine and retrosigmoid approach
- 3) Inferior to otic capsule – Fisch infratemporal fossa type A approach. This involves anterior transposition of facial nerve
- 4) Anterior to otic capsule – involves dealing with Intrapetrous Internal carotid artery. Fisch infratemporal fossa approaches type B, C, and D fall in this category.

Here I am discussing the following five approaches to lateral skull base:

- 1) Translabyrinthine approach
- 2) Transcochlear approach type A
- 3) Retrosigmoid approach
- 4) Retrolabyrinthine approach
- 5) Infratemporal fossa type A approach.

Traumatic facial nerve paralysis – new innovative technique of transcanal facial nerve decompression

V. Kumar

In our experience, as being tertiary referral centre for facial nerve disorders, 117 cases of traumatic facial nerve palsy have been performed. If the patient has grade V to VI facial nerve (FN) paralysis, he needs surgical intervention. In longitudinal fracture, the patient will have bleeding from ear canal or tympanic membrane rupture or haemotympanum with conductive hearing loss. In transverse fracture, the patient will have severe giddiness, vomiting, and sensorineural hearing loss. I have popularized a transcanal FN decompression for longitudinal fracture causing FN paralysis. It is a very easy and safe tech-

nique done under local anesthesia in adults. In 95% of cases, the lesion will be around perigeniculate ganglion. Schirmer's test is very important clue. In 95% of cases, it is positive, there is neither lacrimation, nor reduced lacrimation compared to opposite eye. Otherway round in cases of unrecovered Bell's palsy, it is negative. This gives excellent clue that greater superficial petrosal nerve (GSPN) is involved. Through postauricular approach, tympanomeatal flaps are created. Invariably, a fracture line is seen crossing over the posterior bony meatal wall from squamous part of temporal bone extending over the attic. We perform wide canalplasty. If ossicular chain is intact, we disarticulate the incudostapedial joint, incus is removed, malleus is amputated at the neck, head is pushed posteriorly into attic, handle of malleus is retained with the flap. Then horizontal FN segment is clearly observed. Multiple fragments of supralabyrinthine bone pieces can be seen compressing the geniculate ganglion (GG), GSPN and labyrinthine segment. To get best results it is mandatory to decompress GG, GSPN and labyrinthine segment, and then incise the epineurium from the second genu to GG. Primary ossicular reconstruction – myringostapediopexy with attic reconstruction is done in all the cases. In all the patients, if surgery is performed early timely, there is a complete recovery from FN paralysis. A video presentation will be delivered.

Sun, UV rays and quality of life of our patients ...

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Purpose: Ultraviolet (UV) exposure is beneficial for the normal functioning of the human body, but excessive and uncontrolled radiation can have deleterious effects and lead to damage, including malignancies. The aim of our study was to test the level of people's knowledge about the risk of UV damage of the eyes, as well as objectively measure the changes on the anterior surface following UV exposure.

Methods: The study was based on a validated questionnaire on the effect of UV radiation on the eyes, including the role of the seasons. In order to objectively measure the changes on the ocular surface all 200 subjects was photographed with a specially designed UV camera (based on autofluorescence). Data were analyzed with a statistical package to find a correlation between unhealthy habits and surface damage.

Results: The average age of the respondents (200 subjects) was 33 years (18-63). The results confirm that there is a low awareness among tested population about the UV effect on the eyes. Only 18% of respondents used on regular basis, adequate protection, and 75% believe that UV damage occurs only during the summer season. Correlation between the ultraviolet damage of the anterior eye surface and the knowledge and protection habits was identified.

Conclusion: It is necessary to develop educational programs to increase knowledge about the harmful effects of UV radiation and the use of protective measures. In the future should be organized screening prophylaxis for early diagnosis and sub-clinical damage of the anterior ocular surface.

Otalgia treatment with therapeutic contact lenses – where is the catch?

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Purpose: Pain in the ear and the surrounding area is one of the most common complaints in the outpatient care. Otalgia is primary (the pathology is in the ear) and secondary (the pathology is outside of the ear). The purpose of this retrospective study is to demonstrate the effect of therapeutic contact lenses in patients with trigeminal pain of corneal origin.

Methods: Retrospectively were reported 28 cases with ear pain and 'wet eye'. Patients were referred for eye examination and when corneal pathology was diagnosed, the treatment was with topical therapy and/or therapeutic contact lenses according to our centre approved methodology.

Results: In 27 cases, a corneal defect/recurrent corneal erosion was observed. From the cases with epithelial defects, 17 presented bilateral, epithelial dystrophy of Cogan. One case was with moderate, evaporative dry eye. No clinical signs of active inflammation have been identified. Corneal defects in accordance with the indications (17 eyes) were treated with a therapeutic contact lens following approved methodology. The pain relieve was immediate in patients with therapeutic contact lenses and was encountered as 4 times better at three months follow up, based on subjective pain assessment with 10 item questionnaire.



Conclusion: Trigeminal pain from ocular origin often propagates to the ear and has minimal eye symptoms and signs. The interdisciplinary approach is the key in such cases. Therapeutic contact lenses provide excellent pain relief in ocular surface irritation.

How to differentiate central from peripheral vestibular disorders?

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Looking at the eye movements as a part of neurotology examination can help us to differentiate central from peripheral vestibular disorders. Here is a practical guide how not to miss central vestibular signs.

Nystagmus

The first part of this examination in dizzy patient is to look for spontaneous and gaze evoked nystagmus. The very characteristic sign of peripheral nystagmus is to be stronger when looking at the side of nystagmus direction and to slows down or be absent when looking at the opposite side of the nystagmus direction (Alexander's law). In the absence of fixation it becomes stronger. If the nystagmus changes the direction, it is a sign of central vestibular disorder (periodic alternating nystagmus or gaze evoked nystagmus). Pure vertical or pure torsional nystagmus is of central origin.

Examples of central types of nystagmus include:

Rebound nystagmus is a change of nystagmus direction when returning eyes to the central position after holding the gaze to the side for a while. It is a sign of neural integrator dysfunction. Brun's nystagmus is asymmetrical gaze evoked nystagmus, a combination of central and peripheral nystagmus. It is a sign of large CPU tumours compressing the cerebellum. This nystagmus is a combination of large amplitude slow frequency nystagmus toward gaze to lesion side (cerebellar component) and small amplitude high frequency to the gaze opposite to lesion (vestibular component).

Pursuit and saccades

Saccades hypometria or hypermetria is a sign of cerebellar lesion (usually, dorsal vermis). Impaired pursuit is, usually, due to floccular dysfunction. Special attention should be paid if the pursuit is saccadic just in one direction. During pursuit test if an eye can't adduct it is a sign of internuclear ophthalmoplegia (INO). INO is characteristic sign in multiple sclerosis patients and in stroke as well. Inability to adduct an eye while looking to the contralateral side is because of the lesion of medial longitudinal fasciculus (MLF). INO patients can adduct the eye during convergence eye movement and this test differentiates INO from the partial third nerve palsy. In the clinical practice, some mild forms of INO can be overlooked because adduction at the lesion side is just of reduced velocity and the only sign would be contralateral eye nystagmus while looking to the contralesional side. While testing pursuit in the vertical plane, one can find eye movement paresis in this plane which can be a first sign of progressive supranuclear palsy (PSP).

Ocular tilt reaction (OTR)

Head tilt can be seen both in peripheral and central vestibular disorders. But skew deviation which can be easily revealed by cross cover test is almost always sign of central vestibular pathology. It is a vertical eye misalignment where higher eye is contralateral due to medullary lesion or ipsilateral due to pontine or midbrain lesion.

Head impulse test

Positive head impulse test is a sign of non-functioning vestibulo-ocular reflex (VOR). The positive head impulse test can result from floccular lesion. In patients with bilaterally positive head impulse test and with saccadic smooth pursuit, the visually enhanced vestibulo-ocular reflex (VVOR) test should be positive (like in CANVAS patients). At VVOR test, the patient is asked to look at fixed target while the head is turning slowly from side to side. Saccadic eye movements denote positive test which is a result of non-functioning both VOR and smooth pursuit system.

Positional tests

Positional downbeat nystagmus (PDBN) can be seen in some forms of BPPV like anterior canal canalolithiasis or ageotropic form of the posterior canal. PDBN is commonly a sign of central vestibular disorders. Except history, there are some nystagmus characteristics which would imply peripheral etiology: latency, paroxysmia and crescendo-decrescendo type, torsional component, more pronounced without fixation and very important the nystagmus is accompanied by vertigo. If these signs are absent, central etiology is more obvious.

Direction changing positional nystagmus, geotropic or ageotropic is frequently seen in horizontal canal BPPV. We should be caution not to miss positional direction changing nystagmus in central pathology. If a positional nystagmus is not accompanied by vertigo, if it is a bizarre form, or if it doesn't go away on repeated maneuvers it is mandatory to send the patient to magnet resonance imaging to exclude the central pathology.

Scanning of the pharaohs

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Dr. Hawas and his team started projects to scan the Royal mummies and analyze their DNA. The first project started in 2005. C.T. imaging of the Royal mummies was performed. In this presentation, we shall talk about the identification of the mummy of Queen Hatshepsut through the discovery of a lost tooth. We illustrate also the study of the mummy of the famous king Tut Ankhamun with the purpose to find out the real cause of his death.

Black sea society in otology and neuro-otology – past, present and future

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Introduction: The last 20 years have served as an important period of new scientific relationship among medical doctors at Balkan and Black Sea countries. Old history of the region, good international conditions at the end of the last century and the „100 ENT Clinic“ project of Prof. Jan Grote formed the basis to encourage mobility across borders for students, doctors and staffs in all Europe include the Black Sea region.

Aim: Review of important scientific meetings and relationships in otology and neuro-otology concerning idea for creation of new otology society in Black Sea region.

Methods: Continuing Medical Education (CME) in otology activities in Bulgaria in the last 16 years were analyzed: 30 otology meetings – from the beginning between ORL Clinics’ – Stara Zagora, Edirne; Heraklion and Nish; e-journal „Pro Otology“; Varna Otology Days – congresses, symposiums and meetings with international relation and solidarity.

Results: Working Lunch in „Hearing Loss-Functional Diagnostic and Treatment“ Stara Zagora 2014 – proposal of idea of creation of new Black Sea Society; First and Second Vestibular Days of Varna 2015-2016 with International Participation, preparation for 1-st BSSONO meeting

Conclusion: The established scientific relations on otology of the Balkans have helped to prepare and validate the idea of establishing a new scientific society on otology of the Black Sea countries within European Community’s standards and methods.

Key words: Black Sea Society in Otology and Neuro-Otology, Continuing Medical Education

The functional MSCT (fMSCT) of the middle ear mobile structures is a new noninvasive objective diagnostics method

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Introduction: The overall results of stapes surgery considerably depend on the anatomy peculiarities of complicated temporal bone’s structure.

Materials and methods: Thirty-seven persons (63 ears) with otosclerosis participated in the study. All the patients were examined by microotoscopy, audiologic tests, and multi-slice computer tomography (MSCT). Vestibular window niche was assessed in all the ears according to the following criteria: the width and shape of the niche, the presence and absence of overhanging of facial nerve canal and promontorium over the vestibular window, the width of the stapes footplate and of the stapes cruses, and the distance to the internal vestibular wall. All these ears underwent stapes surgery.

Results: Overhanging of the facial nerve canal over the vestibular window was observed in 14 ears, overhanging of the promontorium – in nine, and protrusion of the facial nerve canal – in six. Wide niche was observed in 45 ears but narrow one – in 18. A rectangular shape was observed in 18 ears, a trapezoid – in 32, and a triangular – in 13. Stapes footplate thickening was established in all the 53 ears and thickening of stapes cruses – in 11 ears. Distance to the internal vestibular wall less than 2 mm was seen in five ears but more than 2 mm – in 58. A ‘standard’ piston stapedoplasty was done 44 ears, an ‘aim’ piston one – in 14, while a ‘standard’ piston stapedoplasty with stapedectomy in five. MDCT sensitivity was 95,2%, specificity – 98,4%, and accuracy – 96,8%.

Conclusion: The MDCT-criteria allow estimating the complexity of the surgery, planning the surgery thoroughly and predicting the outcome.



Българска средновековна представа за устройството на органа на слуха и взаимовръзката му с нервната система, изразени в текст на Йоан Екзарх от IX-ти век

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Йоан Екзарх е един от най-великите български книжовници от Златния век на българската култура. Най-важното му съчинение е „Шестоднев“, което представлява енциклопедия на тогавашното естествознание. Известни са повече от 60 преписа, достигнали до наши дни. С настоящата работа представяме текстовете, описващи органа на слуха, физическата и функционалната му връзка с нервната система според средновековното познание. Йоан Екзарх цитира автори от древността и коментира тезите им. Представа органа на слуха с външно, вътрешно ухо и слухова тръба. Последната е обществено известна, като *tuba eustachii* чрез името на Бартоломей Евстахий, описващ я след близо 600 години (Писма за органа на слуха – 1563 г.). Особено интересни са соматопсихологичните отнасяния и разсъжденията на Йоан Екзарх за мястото на слуховото възприятие в разбирането и осъзнаването на духовния и материалния свят. Ролята на „Шестоднев“, като може би първата естествено-научна книга на неklasически език, е огромна, имайки предвид българското културно пространство по това време, простиращо се от Адриатика до Урал.

Из историята на медицината във Варна

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Зараждане на първата европейска цивилизация. Откриването на Варненския халколитен некропол (1972) и на Раннохалколитните гробове до град Варна (1976) доказва, че през V хил. пр. Хр., населението от крайбрежието на Варна, Лонгоза и СИ Добруджа достига високо ниво на материално и духовно развитие. Според чл. кор. проф. Хенриена Тодорова тук е възникнала най-ранната човешка „протоцивилизация“ – „Късноенеолитна култура Варна“ (4600-4200 г. пр.Хр.). Н.с. Иван Иванов свързва двата некрополя с откритите на 6 – 8 м под съвременното ниво на водите на Варненско-Белославското езеро 8 късно-енеолитни селища и доказва, че в тях се е зародила първата европейска цивилизация.

Проучването на костните останки от 270 погребани във ВХН и 3 в РХГВ разкри сложен погребален ритуал, който следва йерархията в обществото, изразена в неравномерно разпределение като количество, материална и духовна стойност на гробните дарове. 75% от мъжките скелети са в изпънато положение, а 70% от женските в сгънато (ембрионално) положение. Черепите от двата най-богати гроба – № 3 от РХГВ и № 43 от ВХН, се отнасят към европейската голяма раса, с най-близка характеристика до динарския расов тип. Това доказва местния, балкански произход на тези най-високо стоящи в йерархията на техните общества личности. 75,93% от мъжките скелети са на възраст между 20 и 35 години, при пределната възраст 40 – 45 години. 86,49% от женските скелети са на възраст между 18 и 30 години, при пределната възраст 35 – 40 години. Зъбните коронки са силно абразирани, но кариес се среща по-рядко отколкото днес. На някои зъби има медни халкички, поставени вероятно с изцелителна или магическа цел. Гроб 63 е разрушен с ритуална цел, тъй като погребаният е страдал от системно костно заболяване с тежки клинични изяви.

Населението преминава от номадски към уседнал начин на живот в защитени селища с постоянни жилища и от събиране към производство на храни, като култивира пшеница и ечемик и отглежда домашно говедео, овце, кози и свине. Това осигурява защитата му от климатични промени, създава по-добри условия за отглеждане на децата и лечение на болните и подобрява храненето, но повишава риска от епидемии и от появата на зоонози.

В 49 т. нар. „Символични“ гроба от ВХН липсват костни останки от човек. В три от тях са погребани изработени от глина със златни артефакти подобия на човешки глави, изобразяващи „богинята-майка“. В областта на „устните“ им имаше 7 или 6 малки златни артефакти, наподобяващи „гвоздейчета“. Такива златни „гвоздейчета“ се откриха в устната област на 7 скелета, сгънати надясно – 2 на деца, 3 на жени между 20 и 25 години и 2 на израснали, полът на които не беше определен. При 2 от тях има по едно „гвоздейче“ на нивото на зъбите на горната и на долната челюсти, а при 5 – по 1 „гвоздейче“ на нивото на зъбите на горната челюст. Имплантирани са в устните вероятно приживе и са най-древният открит златен „piercing“. В останалите „Символични гробове“ има уникални златни, медни, керамични или мраморни атрибути на властта (жезли, брадви, диадеми, апликации), зооморфни изображения, художествени керамични съдове и други. Впечатляващата форма на два мраморни съда от гроб 41 насочва към възможната им употреба за получаване/съхраняване на субстанции или течности с лечебни или магически свойства.

Възход на медицината в Одесос и региона през Античността. Одесос е основан от гръцки колонисти през втората четвърт на 6-ти век пр. Хр. върху древно тракийско селище. Съществува до 614 г., когато е опустошен. През този период медицината в Одесос е във възход под влиянието на древногръцката, елинистичната, римската и византийската медицински школи. Има данни, че бащата на медицината Хипократ е посетил Одесос, за да проучи причината

за мъжкия инфертилитет в скитските племена, и доказателства, че в Одесос, в Марцианополис (Девня) и в Дионисополис (Балчик) са работили последователи на неговата школа. В Одесос са открити голям брой гробници и/или надгробни плочи, датирани I – III век, с богат лекарски и/или фармацевтичен погребален инвентар и интересни надписи. Надпис от надгробна плоча от Одесос от III век на архириатъра Асклепиад и жена му Анни гласи, че той е главен лекар на обединението на лекарите, ръководи гимназиона и има почетните титли «демофилет» и «аристев». В някои от гробниците е използван тракийския погребален ритуал, а някои от имената на погребаните насочват към техния тракийски произход. В региона са открити много мраморни глави, малки каменни пластики (I – III в.) и оброчни релефи и олтари с изображения на Асклепий, Хигия и Телесфор, с които местното население е изразявало почитта си към божествата, свързани със здравето. Асклепий е почитан и от съседните тракийски племена. По време на император Антоний Пий е построен водопроводът на град Одесос, което го нарежда между санитарно най-благоустроените градове. Термите на Одесос са със застроена площ около 7000 кв. м. и в тях има светилище на Асклепий и Хигия. През периода на войните между Източната Римска империя и нахлуващите готи, авари, славяни, прабългари и други се развиват епидемии (чума през III и VI век), които нанасят тежък удар върху града.

Искуствена деформация на черепа при прабългари. В прабългарски некрополи от VII – IX век от СИ България се откриват до 10%, а в някои – до 14% – 22% черепи с изкуствена деформация, предизвикана от поставена в детството превръзка на главата. През 1969 г. в региона на строящата се гара Повеляново е открит гроб с уникална пръстенонидна форма, в който са погребани около 66 трупа на деца, жени и мъже, като над 80% от откритите черепи са с изкуствена деформация. Най-малкото дете с деформиран череп в гроба е на 2 и половина години, което поставя въпроса за влиянието на тази процедура върху развитието на детския череп.

Трепанация на черепа при прабългари. В прабългарски некрополи се откриват черепи с извършени приживе трепанации. При т.нар. „Символична“ трепанация чрез изгаряне или изрязване се отнема външната пластинка на черепните кости и част от Diploë, докато вътрешната пластинка остава здрава. При т.нар. „Реална“ („Хирургическа“, „Лечебна“) трепанация се създава отвор на мозъчния дял на черепа. В Ранносредновековния некропол в квартал „Трошево“, гр. Варна (IX–X век) е открит череп с отворстие на черепния покрив. Експертизата установи, че се касае за череп на млад индивид, в предно-медиалната част на лявата теменна кост на който има елипсовиден отвор със заоблен гладък ръб, което показва, че той е направен приживе и интервенцията е преживяна. Непосредствено пред него има много малък отвор, който прекосява венечния шев и води в къс канал. В дълбочина се вижда костен фрагмент с неравна повърхност.

Дарителска болница „Параскева Николау“. На 7/20.XI.1869 г. във Варна е открита и от следващия ден приема болни първата гражданска болница с 18 легла, с 8 души персонал и един свещеник, построена и издържана с дарени по завещание средства от родения във Варна, живеещ в Одеса търговец Параскева Николау. Според „Правилник на болницата“ лекарят трябва да има докторат по медицина от университет, а аптекарят диплома по фармация. „Строго се забранява на лекаря да получава пари или подаръци от болните. Лечението на всички пациенти без разлика от вяра, народност и пол е безплатно. Допущат се старци и умопомрачени (съгласно завещанието). Приютяват се скитници и сирачета.“ Във връзка със 100-годишнината от създаването на болницата възниква идея в нейната сграда да се създаде музейна сбирка, и в 1985 г. в нея е открит Музей по история на медицината.

Варненско медицинско дружество. През 1883 г. във Варна е учредено Медицинско дружество с председател д-р Михаил Василиевич Игнатиев и заместник-председател д-р Ангел Димитров Пюсюлюев, което поставя основите на организиран професионален и научен живот на лекарите в града. По хронология то е второто дружество с участие на лекари в България, след основаното в 1880 г. в София „Физико-медицинско общество“. В дружеството членуват влиятелни лекари и от други градове и то има важна роля за развитието на здравното дело и за професионалното и научното организиране на лекарите както във Варна, така и в цяла България. По редица поводи то прави предложения пред Варненското общинско управление и пред Върховния медицински съвет. Важна роля за издигане авторитета на дружеството изиграва печатният му орган „Медицинско списание“, в което се поместват статии на български и чуждестранни автори. През 1901 г. дружеството подкрепя предложението за Устав на Лекарския съюз в България, взема участие в Първия и Втория Лекарски събори и става член на съюза.