The Journal ofInternationalInternationalAdvaacedOtology

Paget Disease of Temporal Bone

Page 268

Vol. 11 | Issue 3 | December 2015



Official Journal of The Mediterranean Society of Otology and Audiology

www.advancedotology.org



SCI ENARCHIRD



Member of









SCI EXPANDED

EDITOR

O. Nuri Özgirgin Department of Otolaryngology-Head and Neck Surgery, Bayındır Hospital, Ankara, Turkey

ASSOCIATE EDITOR

Bülent Satar

Department of Otolaryngology, Gülhane Military Medical Academy, Ankara, Turkey

ADMINISTRATIVE ADVISORY BOARD

Abdelhamid Benghalem Department of Otolaryngology, Cabinet, Casablanca, Marocco

Antonio della Volpe Department of Otolaryngology, Santobono Paediatric Hospital, Naples, Italy

Antonio Quaranta Department of Otolaryngology, University of Bari, Bari, Italy

Armağan İncesulu Department of Otolaryngology, Eskişehir Osmangazi University, Eskişehir, Turkey

Ashley Wackym Department of Otolaryngology, Ear and Skull Base Institute, Portland, USA

Ayhan Gökler Department of Otorhinolaryngology, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

Bruce Gantz Department of Otolaryngology, University of Iowa, Iowa, USA

Constantino Morera Department of Otolaryngology, University of Valencia, Valencia, Spain

Erol Belgin Department of Otolaryngology, Başkent University, Ankara, Turkey Erwin Offeciers Department of Otolaryngology, Sint-Augustinus Hospital University, Wilrijk, Belgium

George Zaytoun Department of Otolaryngology, American University, Beirut, Lebanon

Haruo Takahashi Department of Otolaryngology, University of Nagasaki, Nagasaki, Japan

Hiroshi Moriyama Department of Otolaryngology, Jikei University School of Medicine, Tokyo, Japan

Jacques Magnan Department of Otolaryngology, Causse Ear Clinic, Beziers, France

Karl B. Huttenbrink Department of Otolaryngology, University of Köln, Köln, Germany

Lorne Parnes Department of Otolaryngology, University of Western Ontario, Ontario, Canada

Anestis Psifidis Department of Otolaryngology, University of Thessaloniki, Greece

Malou Hultcrantz Department of Otolaryngology, Karolinska University Hospital, Stockholm, Sweden Milan Stankovic Department of Otolaryngology, University of Nis, Nis, Serbia

Mislav Gjuric Department of Otolaryngology, Sinteza Health Center, Zagreb, Croatia

Nazım Korkut Department of Otolaryngology, İstanbul University, İstanbul, Turkey

Orhan Yılmaz Department of Otolaryngology, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

Per Caye Thomasen Department of Otolaryngology, Gentofte University Hospital, Hellerup, Denmark

Robert Filipo Department of Otolaryngology, Sapienza University, Rome, Italy

Tayfun Kirazlı Department of Otolaryngology, Ege University, İzmir, Turkey

Wolf Dieters Baumgartner Department of Otolaryngology, University Clinic Vienna, Vienna, Austria

Akdeniz Ülkeleri Otoloji ve Odyoloji Derneği adına Sahibi ve Sorumlu Yazı İşleri Müdürü / Owner and Responsible Manager on behalf of the The Mediterranean Society of Otology and Audiology: O. Nuri Özgirgin • Yayın Türü / Publication Type: Yerel süreli / Local periodical • Basım yeri / Printed at: ADA Ofset, 2. Matbaacılar Sit. E Blok No: (ZE2) 1. Kat Topkapı, İstanbul, Turkey (+90 212 567 12 42) • Basım tarihi / Printing Date: Aralık 2015 / December 2015 • Akdeniz Ülkeleri Otoloji ve Odyoloji Derneği tarafından yayınlanmaktadır / Published by The Mediterranean Society of Otology and Audiology, Hatay Sokak 4/8 Kızılay, Ankara, Turkey (+90 312 235 41 00)



Publisher İbrahim KARA Publication Director

Ali ŞAHİN Deputy Publication Directors

Gökhan ÇİMEN Dilşad GÜNEY Publication Coordinators

Esra GÖRGÜLÜ Ebru MUTLU Betül ÇİMEN Nihan GÜLTAN ZeynepYAKIŞIRER Finance Coordinator Veysel KARA

Project Coordinator Hakan ERTEN

Project Assistants Büşra KALKAN Duygunur CAN

Graphics Department Ünal ÖZER Neslihan YAMAN Kübra ÇOLAK

Contact

Address : Büyükdere Cad. No: 105/9 34394 Mecidiyeköy Şişli, İstanbul, Turkey Phone : +90 212 217 22 92 E-mail : info@avesyayincilik.com

EDITORIAL CONSULTANTS

Babür Akkuzu Department of Otolaryngology, American Hospital, İstanbul, Turkey

Songül Aksoy Department of Audiology, Hacettepe University Ankara, Turkey

Mesut Akyol Department of Statistic, Gülhane Military Academy, Ankara, Turkey

Cüneyt Alper Department of Otolaryngology, University of Pittsburg, Pennsylvania, U.S.A.

Helge Rask Andersen Department of Otolaryngology, Uppsala University Hospital, Uppsala, Sweden

Francisco Antoli-Candela Department of Otolaryngology, Clinica Antoli Candela, Madrid, Spain

Fazıl Necdet Ardiç Department of Otolaryngology, Pamukkale University, Denizli, Turkey

Miguel Aristegui Department of Otolaryngology, Hospital General Universitario Gregorio Maranon, Madrid, Spain

Bernard Ars Department of Otolaryngology, University of Antwerp, Abtwerp, Belgium

Asım Aslan Department of Otolaryngology, Celal Bayar University, Manisa, Turkey

Ahmet Ataş Department of Otolaryngology, İstanbul University, İstanbul, Turkey

Manohar Bance Department of Otolaryngology, Dalhousie University, Halifax Nova Scotia, Canada

Maurizio Barbara Department of Otolaryngology, Sapienza University, Sant'Andrea Hospital, Rome, Italy

Saba Battelino Department of Otolaryngology, University Medical Centre, Ljubljana, Slovenia

Wolf-Dieters Baumgartner Department of Otolaryngology, University Clinic Vienna, Viena, Austria

Yıldırım Bayazıt Department of Otolaryngology, Medipol University, İstanbul, Turkey

Aziz Belal Department of Otolaryngology, Alex Ear Center, Alexandria, Egypt

Erol Belgin Department of Otolaryngology, Başkent University, Ankara, Turkey

Abdelhamid Benghalem Department of Otolaryngology, Cabinet University of lowa, Casablanca, Morocco

Bruce Black Department of Otolaryngology, Royal Children's Hospital, Brisbane, Australia

Robert Briggs Department of Otolaryngology, Royal Victorian Eye and Ear Hospital, Melbourne, Australia

Rubens de Brito Department of Otolaryngology, University of Sao Paulo, Sao Paulo, Brazil

Jan W. Casselman Department of Otolaryngology, AZ St. Jan Brugge-Oostende AV, Brugge, Belgium

Carlos Cenjor Español Department of Otolaryngology, Fundacion Jimenez Diaz - Clinica Nuestra Senora Concepcion, Madrid, Spain

Sun O. Chang Department of Otolaryngology, Seoul National University Hospital, Seoul, South-Korea

Udi Cinamon Department of Otolaryngology, Edith Wolfson Medical Center, Cholon, Israel

Onur Celik Department of Otolaryngology, Celal Bayar University, Manisa, Turkey

Giovanni Danesi Department of Otolaryngology, Ospedale Papa Giovanni XXIII - Bergamo, Bergamo, Italy

Vincent Darrouzet Department of Otolaryngology, Hospital Pellegrin, Bordeaux, France

Pavel Dimov Department of Otolaryngology, University of Stara Zagora, Stara Zagora, Bulgaria

Stefan Dazert Department of Otolaryngology, Ruhr University of Bochum, Bochum, Germanv

İrfan Devranoğlu Department of Otolaryngology, İstanbul University, İstanbul. Turkev

Gerard O'Donoghue Department of Otolaryngology, Queen's Medical Centre, University Hospital, Nottingham, UK

John Dornhoffer Department of Otolaryngology, UAMS Medical Center, Little Rock, USA

Bruce M. Edwards Department of Otolaryngology, Medical Center, Ann Arbor, Michigan, USA

Badr el Mostafa Department of Otolaryngology, Ain-Shams University, Cairo, Egypt

Roberto Filipo Department of Otolaryngology, Sapienza University, Rome, Italy

Alec Fitzgerald O'Connor Department of Otolaryngology, St. Thomas' Hospital, London, UK

Arun K. Gadre Department of Otolaryngology, University of Louisville, Kentucky, USA

Bruce Gantz Department of Otolaryngology, University of Iowa, . Iowa, USA

Aydan Genç Department of Audiology, Hacettepe University, Ankara, Turkey

Mislav Giuric Department of Otolaryngology, SINTEZA Health Center, Zagreb, Croatia

Enis Alpin Güneri Department of Otolaryngology, Dokuz Eylül University, İzmir, Turkey

Wilko Grolman Department of Otolaryngology, University of Utrecht, Utrecht, Netherlands

İbrahim Hizalan Department of Otolaryngology, Novomet ENT Center, Bursa, Turkey

Karl-Bernd Hüttenbrink Department of Otolaryngology, University of Köln, Köln, GERMANY

Yukiko Lino Department of Otolaryngology, Jichi Medical University Saitama Medical Center, Saitama, Japan

Armağan İncesulu Department of Otolaryngology, Eskişehir Osmangazi University, Eskişehir, Turkey

Herman Jenkins Department of Otolaryngology, University of Colorado, Denver, USA

Daniel Jiang Department of Otolaryngology, St. Thomas' Hospital, London, UK

Mohan Kameswaran Department of Otolaryngology, Madras ENT Research Foundation, Chennai, India

Daniel Kaplan Department of Otolaryngology, Ben Gurion University, Beer Sheva, Israel

Paul Kileny Department of Otolaryngology, University of Michigan, Michigan, ÚSĂ

Chong-Sun Kim Department of Otolaryngology, University of Seoul, Seoul, South-Korea

Tavfun Kirazlı Department of Otolaryngology, Ege University, İzmir, Turkey

Mete Kıroğlu Department of Otolaryngology, Çukurova University, Adana, Turkey

Özlem Konukseven Department of Otolaryngology, Atatürk Hospital, Ankara, Turkey

Nazım Korkut

Department of Otolaryngology, İstanbul University, İstanbul, Turkey

Jona Kronenberg Department of Otolaryngology, Zerifin Tel Aviv University, Tel-Hashomer, Israel Maviş Kulak Kayıkçı

Department of Audiology, Hacettepe University, Ankara, Turkey

Roland Laszig Department of Otolaryngology, University of Freiburg, Freiburg, Germany

Stephen O'Leary Department of Otolaryngology, University of Melbourne, Melbourne, Australia

Thomas Linder Department of Otolaryngology, University of Luzern, Luzern, Switzerland

Christopher Linstrom Department of Otolaryngology, New York Eye and Ear Infirmary, New York, USA

Michal Luntz Department of Otolaryngology, Bnai Zion Medical Center, Haifa, Israel

Jacques Magnan Department of Otolaryngology, Causse Ear Clinic, Beziers, France

Manuel Manrique Department of Otolaryngology, University of Pamplona, Pamplona, Spain

Gino Marioni Department of Otolaryngology, University of Padova, Italy

David Andrew Moffat Department of Otolaryngology, University of Cambridge, Cambridgeshire, UK

Per Moller Department of Otolaryngology, University of Bergen, Bergen, Norway

Michel Mondain Department of Otolaryngology, Hospital St. Charles, Montpeiller, France

Constantino Morera Department of Otolaryngology, University of Valencia, Valencia, Spain

Jef Mulder Department of Otolaryngology, Radboud University Hospital, Nijmegen, Netherlands

Emmnauel Mylanus Department of Otolaryngology, University of Nijmegen, Nijmegen, Netherlands

Thomas Nikolopoulos Department of Otolaryngology, University of Athens, Athens, Greece

Onur Odabaşı Department of Otolaryngology, Adnan Menderes University, Aydın, Turkey

F. Erwin Offeciers Department of Otolaryngology, Sint-Augustinus Hospital University, Wilrijk, Belgium Seung Ha Oh Department of Otolaryngology, Seoul National University Hospital, Seoul, South-Korea

Levent Olgun Department of Otolaryngology, İzmir Bozyaka Hospital, İzmir, Turkey

Carlos A. Oliveira Department of Otolaryngology, University of Brasília Medical School, Brasilia, Brazil

Ewa Olszewska Department of Otolaryngology, Medical University of Bialystok, Bialystok, Poland

Suat Özbilen Department of Otolaryngology, Gazi University, Ankara, Turkey

Levent Naci Özlüoğlu Department of Otolaryngology, Başkent University, Ankara, Turkey

Blake Papsin Department of Otolaryngology, University of Toronto, Toronto, Canada

Keehyun Park Department of Otolaryngology, Ajou University School of Medicine, Suwon, South-Korea

Lorne Parnes Department of Otolaryngology, University of Western Ontario, Ontario, Canada

Ronen Perez Department of Otolaryngology, Shaare Zedek Medical Center, Jerusalem, Israel

Fabio Piazza Department of Otolaryngology, University of Parma, Parma, Italy

Stefan Plontke Department of Otolaryngology, University Hospital Halle, Saale, Germany

Dennis Poe Department of Otolaryngology, Children's Hospital Boston, Boston, USA

Livio Presutti Department of Otolaryngology, Policlinico University of Modena, Modena, Italy

Marco Puterman Department of Otolaryngology, Ben Gurion University, Beer Sheva, Israel

Antonio Quaranta Department of Otolaryngology, University of Bari, Bari, Italy

Nicola Quaranta Department of Otolaryngology, University of Bari, Bari, Italy

Angel Ramos Department of Otolaryngology, University Hospital Insular, Las Palmas de Gran Canaria, Spain

Hans Ramsay Department of Otolaryngology, Helsinki University Hospital, Helsinki, Finland

Shakeel Saeed Department of Otolaryngology, University College London, London, United Kingdom Ayşe Sanem Şahlı Department of Audiology, Hacettepe University Audiology Dept, Ankara, Turkey

Masafumi Sakagami Department of Otolaryngology, Hyoto College of Medicine, Nishinomiya, Japan

Mario Sanna Department of Otolaryngology, Gruppo Otologico, Piacenza, Italy

Bülent Şerbetçioğlu Department of Otolaryngology, Medipol University, Istanbul, Turkey

Aristides Sismanis Department of Otolaryngology, University of Athens, Athens, Greece

Henryk Skarzynski Department of Otolaryngology, World Hearing Center, Warsaw, Poland

Thomas Somers Department of Otolaryngology, Sint-Augustinus Hospital University, Wilrijk, Belgium

Sven Eric Stangerup Department of Otolaryngology, Gentofte University Hospital, Copenhagen, Denmark

Milan Stankovic Department of Otolaryngology, University of Nis, Nis, Serbia

Holger Sudhoff Department of Otolaryngology, Bielefeld Academic Teaching Hospital, Muenster University, Bielefeld, Germany

Istvan Sziklai Department of Otolaryngology, University of Debrecen, Debrecen, Hungary

Haruo Takahashi Department of Otolaryngology, University of Nagasaki, Nagasaki, Japan

Sugata Takahashi Department of Otolaryngology, University of Niigata, Niigata, Japan

Rinze A. Tange Department of Otolaryngology, University of Utrecht, Utrecht, Netherlands

Per Caye Thomasen Department of Otolaryngology, Gentofte University Hospital, Hellerup, Denmark

Franco Trabalzini Department of Otolaryngology, University of Siena, Siena, Italy

Eric Truy Department of Otolaryngology, University of Lyon, Lyon, France

Tuncay Uluğ Department of Otolaryngology, İstanbul University, İstanbul, Turkey

Cem Uzun Department of Otolaryngology, Trakya University, Edirne, Turkey

Paul Van de Heyning Department of Otolaryngology, University of Antwerp, Antwerp, Belgium

Antonio della Volpe Department of Otolaryngology, Santobono Pediatric Hospital, Naples, Italy

Robert Vincent Department of Otolaryngology, Causse Ear Clinic, Béziers-Colombiers, France

Ashley Wackym Department of Otolaryngology, Ear and Skull Base, Institute, Portland, USA

Stephen Wetmore Department of Otolaryngology, University West Virginia Medical Center, Morgantown, U.S.A. loannis Xenelis Department of Otolaryngology, University of Athens, Athens, Greece

John Xenelis Department of Otolaryngology, University of Athens, Athens, Greece

Sertaç Yetişer Department of Otolaryngology, Anadolu Hospital, İstanbul, Turkey

Orhan Yılmaz Department of Otolaryngology, Dışkapı Hospital, Ankara, Turkey

Robin Youngs Department of Otolaryngology, Gloucestershire Royal Hospital, Gloucestershire, UK Matthew Yung Department of Otolaryngology, Ipswich Hospital, Ipswich, UK

Thomas Zahnert Department of Otolaryngology, University Hospital Dresden, Dresden, Germany

Diego Zanetti Department of Otolaryngology, University of Brescia, Brescia, Italy

George Zaytoun Department of Otolaryngology, American University, Beirut, Lebanon

Hans Peter Zenner Department of Otolaryngology, University of Tubingen, Tubingen, Germany

THE MEDITERRANEAN SOCIETY OF OTOLOGY AND AUDIOLOGY (MSOA) INTERNATIONAL EXECUTIVE COMMITTEE

President Constantino Morera, Department of Otolaryngology, University of Valencia, Valencia, Spain

Former Presidents

Jacques Magnan, Department of Otolaryngology, Causse Ear Clinic, Beziers, France

Anestis Psifidis Department of Otolaryngology, University of Athens, Athens Greece

Vice President

Armağan İncesulu Department of Otolaryngology, Eskişehir Osmangazi University, Eskişehir, Turkey Secretary Antonio della Volpe Department of Otolaryngology, Santobono Paediatric Hospital, Naples, Italy

Treasurer Saba Battelino Department of Otolaryngology, University Medical Centre, Ljubljana, Slovenia

Founder Antonio Quaranta Department of Otolaryngology, University of Bari, Bari, Italy

Members

Fatthi Abdel Baki Department of Otolaryngology, Alexandria University, Alexandria, Egypt Abdelhamid Benghalem Department of Otolaryngology, Cabinet University of Iowa, Casablanca, Marocco

Hajri Hella Department of Otolaryngology, El manar University, Tunis, Tunisia

Ronen Perez Department of Otolaryngology, Shaare Zedek Medical Center, Jerusalem, Israel

Marc Bassim American University of Beirut Medical Center, Beirut, Lebanon

O. Nuri Ozgirgin (Turkey) (Editorial Position) Department of Otolaryngology-Head and Neck Surgery, Bayındır Hospital, Ankara, Turkey

LOCAL OFFICERS (TURKEY)

O. Nuri Özgirgin, Armağan İncesulu, Erol Belgin, Orhan Yılmaz, Tayfun Kirazlı, Nazım Korkut, Ayhan Gökler

Owned and published by The Mediterranean Society of Otology and Audiology (MSOA) Hatay Sokak 4/8 Kızılay, Ankara – Turkey Fax: +90 312 235 41 00 URL: www.mediotol.org e-mail: info@mediotol.org



Holder and accountability for content on behalf of MSOA

Prof. Dr. O. Nuri Özgirgin Bayındır Hastanesi, Söğütözü, Ankara, Turkey Tel: +90 312 287 90 00 – int: 7811 Fax: +90 312 284 42 76 e-mail: ozgirgin@politzersociety.org



Address for correspondence

Mailing address: IAO, POB 108, 06502, Bahçelievler, Ankara, Turkey URL: www.advancedotology.org E-mail: jiao@advancedotology.org Fax: +90 312 235 41 00

Subscription

Membership of MSOA includes a subscription to the Journal. The Journal is not sold seperately. The paper is acid free and meets the requirements for permanence set by the ISO 9706

The Journal of International Advanced Otology (J Int Adv Otol)

Issues three times a year Copyright © 2005-2014. All rights reserved. ISSN 1308-7649 E ISSN 2148-3817

Aims and Scope

The Journal of International Advanced Otology (IAO – Citation Abbreviation: J Int Adv Otol) is the open access double-blind peer-reviewed, international publication organ of the The Mediterranean Society of Otology and Audiology. The journal is also supported by the Politzer Society. The Journal of International Advanced Otology is published 3 times per year on April, August, December and its publication language is English.

The scope of the Journal is limited with otology, neurotology, audiology (excluding linguistics) and skull base medicine.

The Journal of International Advanced Otology aims to publish manuscripts at the highest clinical and scientific level. J Int Adv Otol publishes original articles in the form of clinical and basic research, review articles, short reports and a limited number of case reports. Controversial patient discussions, communications on emerging technology, and historical issues will also be considered for publication.

Target audience of J Int Adv Otol includes physicians and academic people who are interested in both clinical and basic sciences.

Editorial and publication processes of the journal are shaped in accordance with the guidelines of the international organizations such as the International Council of Medical Journal Editors (ICMJE), the World Association of Medical Editors (WAME), the Council of Science Editors (CSE), the Committee on Publication Ethics (COPE), the European Association of Science Editors (EASE)

The Journal of International Advanced Otology is indexed in Science Citation Index Expanded, PubMed/MEDLINE, Index Copernicus, EBSCO, PROQUEST, SCOPUS.

J Int Adv Otol is funded by revenue generated by advertising as well as the support of the founder organization, The Mediterranean Society of Otology and Audiology.

Subscription information

The access to all full-text issues of the journal is free at www.advancedotology.org. The journal is distributed among the member of the Mediterranean Society of Otology and Audiology free of charge. To become a member of the society, please visit www.mediotol.org.

Permissions and Reprints

Permissions for reproduction of materials published and reprints in the Journal of International Advanced Otology should be requested from the editorial office at ozgirgin@politzersociety.org. Authors who submit color figures will receive an estimate of the cost for color reproduction.

Advertising

For requests concerning advertising, please contact the Publisher.

Editorial Office: Prof. Dr. O. Nuri Ozgirgin

Bayındır Hastanesi, Söğütözü, Ankara, Turkey Tel: +90 312 287 90 00 – int: 7811 Fax: +90 312 284 42 76 e-mail: ozgirgin@politzersociety.org Mailing address: IAO, POB 108, 06502, Bahçelievler, Ankara, Turkey

Publisher: AVES - İbrahim Kara

Address: Büyükdere Cad. 105/9 34394 Mecidiyeköy, Şişli, İstanbul Phone: +90 212 217 17 00 Fax: +90 212 217 22 92 Web page: www.avesyayincilik.com E-mail: info@avesyayincilik.com

Instructions for authors

Instructions for authors are published in the journal pages and could be accessed at the web site of the journal - www.advancedotology.org.

Material Disclaimer

Statements or opinions expressed in the manuscripts published in the Journal of International Advanced Otology reflect the views of the author(s) and not the opinions of the editors, the editorial board and the publisher; the editors, the editorial board and the publisher disclaim any responsibility or liability for such materials.

The journal is printed on an acid-free paper.

Instructions to Authors

The Journal of International Advanced Otology (IAO – Citation Abbreviation: J Int Adv Otol) is the double-blind peer-reviewed, international publication organ of the Mediterranean Society of Otology and Audiology directed to an audience of physicians who are interested in both clinical and basic science. The Journal of International Advanced Otology publishes original articles in the form of clinical and basic research, review articles, short reports and a limited number of case reports. Controversial patient discussions, communications on emerging technology, and historical issues will also be considered for publication.

Editorial and publication processes of the journal are shaped in accordance with the guidelines of the international organizations such as the International Council of Medical Journal Editors (ICMJE), the World Association of Medical Editors (WAME), the Council of Science Editors (CSE), the Committee on Publication Ethics (COPE), the European Association of Science Editors (EASE)

The Journal of International Advanced Otology will only evaluate manuscripts submitted via the journal's self-explanatory online manuscript submission and evaluation system, manuscripts submitted via any other medium will not be evaluated.

Previously published manuscripts (except in the form of an abstract or a preliminary report), and manuscripts that are under consideration for possible publication elsewhere will not be accepted for evaluation.

The Journal of International Advanced Otology requires each submission to be accompanied by a Copyright Transfer Form, an Author Contributions Form and an ICMJE Form for Disclosure of Potential Conflicts of Interest.

Statements or opinions expressed in the manuscripts published in the Journal of International Advanced Otology reflect the views of the author(s) and not the opinions of the editors, the editorial board and the publisher; the editors, the editorial board and the publisher disclaim any responsibility or liability for such materials.

The final responsibility in regard to the published articles rests with the authors.

Each individual listed as an author should fulfil the authorship criteria recommended by the International Committee of Medical Journal Editors (Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals. <u>http://www.icmje.org</u>). Individuals who contributed to the preparation of the manuscript but do not fulfil the authorship criteria should be acknowledged in an acknowledgments section, which should be included in the title page of the manuscript.

The Journal of International Advanced Otology requires and encourages the authors and the individuals involved in the evaluation process to disclose any existing or potential conflicts of interests including financial, consultant, institutional and other relationships that might lead to bias or a conflict of interest.

All sources of funding should be acknowledged in the manuscript.

The authors should state in the Materials and Methods section of the main text that experiments have been performed in comply with the ethical principles of the assigned institutional board or national committee. Application or approval number/year for the study should also be indicated. For animal experiments, the authors additionally should state that international standards regarding the animal care and handling have been followed during the experiments.

It is the author's responsibility to ensure that a patient's anonymity be carefully protected and to verify that any experimental investigation with human subjects reported in the manuscript was performed with informed consent and following all the guidelines for experimental investigation with human subjects required by the institution(s) with which all the authors are affiliated. For photographs that may reveal the identity of the patients, signed releases of the patient or of his/her legal representative should be enclosed; otherwise, patient names or eyes must be masked out to prevent identification.

When reporting experiments on human subjects, indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) and with the Helsinki Declaration (JAMA 2000;284:3043–3049).

As part of submission of the manuscript, the correspondent author should send a short statement declaring that he/she accepts to undertake all the responsibility for authorship during the submission and review stages of the manuscript.

Originality, high scientific quality and citation potential are the most important criteria for a manuscript to be accepted for publication.

Manuscripts submitted to the journal will first go through a technical evaluation process where the editorial office staff will ensure that the manuscript is prepared and submitted in accordance with the journal's guidelines. Submissions that don't adhere the journal's guidelines will be returned back to the submitting author with technical correction requests. Manuscripts that adhere the journal's guidelines will be reviewed by at least 3 external peer reviewers during the evaluation process. The Editor in Chief is the final authority in the decision making process.

Authors of a paper accepted for publication in J Int Adv Otol should be in consent of that editors could make corrections without changing the basic meaning of the text of the manuscript.

The submitting authors will be automatically informed by the journal's manuscript submission and evaluation system of any changes in the status of their submission.

MANUSCRIPT PREPARATION

Manuscripts should be prepared in accordance with the ICMJE - Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals (updated in December 2015 – available at <u>www.icmje.org</u>).

Original Investigations and Reviews should be presented according to the guidelines: randomized study – CONSORT, observational study – STROBE, study on diagnostic accuracy – STARD, systematic reviews and meta-analysis PRISMA, animal experimental studies – ARRIVE, non-randomized behavioural and public health intervention studies – TREND.

Title page

A separate title page should be submitted with all submissions and should include the title of the manuscript, name(s), affiliations and major degree(s) of the author(s) and source(s) of the work or study, a short title (running head) of no more than 50 characters. The name, address, telephone (including the mobile phone number) and fax numbers and e-mail address of the corresponding author should be listed on the title page. Grant information and other sources of support should also be included on the Title page. Individuals who contributed to the preparation of the manuscript but do not fulfil the authorship criteria should be acknowledged in the title page.

Main Document

Abstract

All manuscripts should be accompanied an abstract. A structured abstract is required with original articles and it should include the following subheadings: Objective, Materials and Methods, Results and Conclusion. A structured abstract is not required with review articles and case reports. The abstract should be limited to 250 words for original articles and review articles and 150 words for case reports.

Keywords

Each submission should be accompanied by 3 to 5 keywords which should be picked from the Medical Subject Headings (MeSH) list (<u>www.nlm.</u> <u>nih.gov/mesh/MBrowser.html</u>).

Main Text

The main text of Case Reports should be limited with 1200 words and should be structured with the following subheadings; Introduction, Case Presentation and Discussion. The maximum number of references cited in a case report should be 10.

The subheadings of the review articles should be planned by the authors. However, each review article should include a "Conclusion" section. The main text of review articles should be limited with 5000 words. The number of references cited should not exceed 50.

Original Articles should be structured with Introduction, Materials and Methods, Results subheadings Discussion. The number of references cited should not exceed 35 and the main text should be limited to 3000 words.

All acronyms and abbreviations used in the manuscript should be defined at first use, both in the abstract and the main text. The abbreviation should be provided in parenthesis following the definition.

Statistical analysis should be performed in accordance with guidelines on reporting statistics in medical journals (Altman DG, Gore SM, Gardner MJ, Pocock SJ. Statistical guidelines for contributors to medical journals. Br Med J 1983: 7; 1489-93.). Information on the statistical analysis process of the study should be provided within the main text.

When a drug, product, hardware, or software mentioned within the main text product information, including the name of the product, producer of the product, city of the company and the country of the company should be provided in parenthesis in the following format: "Discovery St PET/CT scanner (General Electric, Milwaukee, WI, USA)"

All references, tables and figures should be referred to within the main text and they should be numbered consecutively in the order they are referred to within the main text.

Limitations, drawbacks and shortcomings of original articles should be mentioned in the "Discussion" section before the conclusion paragraph.

References

References should be numbered consecutively in the order they are referred to within the main text and all references listed in the reference list should be referred to within the main text in parenthesis. Style and punctuation of each reference in the reference list should be in accordance with the examples listed below;

Standard journal article: Journal titles should be abbreviated in accordance with journal abbreviations used in Index Medicus (for journal abbreviations consult List of Journals indexed for MEDLINE published annually by NLM at http://www.nlm.nih.gov/tsd/serials/lji.html). When there are six or fewer authors, all authors should be listed. If there are seven or more authors, first 6 should be listed, followed by "et al.". A list of authors should be followed by the full title of the article, journal title, year, volume and page numbers.

Example: Pirvola U, Xing-Qun L, Virkkala J, Saarma M, Murakata C, Camoratto AM, et al. Rescue of hearing, auditory hair cells, and neurons by CEP-1347/KT7515, an inhibitor of c-Jun N-terminal kinase activation. J Neurosci 2000; 20: 43-50.

Books:

Chapter in a book: Sherry S. Detection of thrombi. In: Strauss HE, Pitt B, James AE, editors. Cardiovascular Medicine. St Louis: Mosby; 1974.p. 273-85.

Personal author(s): Cohn PF. Silent myocardial ischemia and infarction. 3rd ed. New York: Marcel Dekker; 1993.

Editor (s), compiler(s) as author: Norman IJ, Redfern SJ, editors. Mental health care for elderly people. New York: Churchill Livingstone; 1996.

Conference paper:

Bengisson S. Sothemin BG. Enforcement of data protection, privacy and security in medical informatics. In: Lun KC, Degoulet P, Piemme TE, Rienhoff O, editors. MEDINFO 92. Proceedings of the 7th World Congress on Medical Informatics; 1992 Sept 6-10; Geneva, Switzerland. Amsterdam: North-Holland; 1992. P. 1561-5.

Scientific or technical report:

Smith P. Golladay K. Payment for durable medical equipment billed during skilled nursing facility stays. Final report. Dallas (TX) Dept. of Health and Human Services (US). Office of Evaluation and Inspections: 1994 Oct. Report No: HHSIGOE 169200860.

Dissertation:

Kaplan SI. Post-hospital home health care: the elderly access and utilization (dissertation). St. Louis (MO): Washington Univ. 1995.

Article in electronic format:

Morse SS. Factors in the emergence of infectious diseases. Emerg Infect Dis (serial online) 1995 Jan-Mar (cited 1996 June 5): 1(1): (24 screens). Available from: http://www.cdc.gov/ncidodlEID/cid.htm.

Tables

Tables should be included in the main document and should be presented after the reference list. Tables should be numbered consecutively in the order they are referred to within the main text. A descriptive title should be provided for all tables and the titles should be placed above the tables. Abbreviations used in the tables should be defined below the tables by footnotes (even if they are defined within the main text). Tables should be created using the "insert table" command of the word processing software and they should be arranged clearly to provide an easy reading. Data presented in the tables should not be a repetition of the data presented within the main text but should be supporting the main text.

Figures and Figure Legends

Figures, graphics and photographs should be submitted as separate files (in TIFF or JPEG format) through the submission system. The files should not be embedded in a Word document or the main document. When there are figure subunits, the subunits should not be merged to form a single image. Each subunit should be submitted separately through the submission system. Images should not be labelled (a, b, c, etc.) to indicate figure subunits. Thick and thin arrows, arrowheads, stars, asterisks and similar marks can be used on the images to support figure legends. Like the rest of the submission, the figures too should be blind. Any information within the images that may indicate an individual or institution should be blinded. The minimum resolution of each submitted figure should be 300DPI. To prevent delays in the evaluation process all submitted figures should be clear in resolution and large in size (minimum dimensions 100x100mm)

Color figures: Authors who submit color figures will receive an estimate of the cost for color reproduction. Otherwise the figures will be converted to black and white.

Figure legends should be listed at the end of the main document. When there are figure subunits, the figure legends should be structured in the following format.

Example: Figure 4. a-d. Effects of xylitol on viability of HMEECs and HEI-OC1s. Xylitol at concentrations of up to 1000 µg/mL did not decrease the viability of HMEECs and HEI-OC1s (a). Xylitol at concentrations of up to 1000 µg/mL did not induce apoptosis or necrosis of HMEECs and HEI-OC1s (b, c). Morphology of HMEECs and HEI-OC1s remained unchanged by xylitol at concentrations of up to 1000 µg/mL (light microscope, x200 and HOechst 33342 staining, x400). The data shown are means±standard deviations of three repeated experiments from six samples (c, d)

Once a manuscript is accepted for publication it will be provided with a registered DOI number following the acceptance decision. Manuscripts accepted for publication by the Journal of International Advanced Otology will be published as ahead of print articles prior to the printing date of their scheduled issue. Corresponding author will be provided with a PDF Proof by the publisher once the production process of an accepted manuscript is over. The publisher will request the corresponding author to list their correction requests if there are any and approve the publication of the manuscript.

Subscription information

The access to all full-text issues of the journal is free at www.advancedotology.org. The journal is distributed among the member of the Mediterranean Society of Otology and Audiology. To become a member of the society, please visit www.mediotol.org.

Permissions and Reprints

Permissions for reproduction of materials published and reprints in the Journal of International Advanced Otology should be requested from the editorial office at ozgirgin@politzersociety.org.

Instructions for authors

Instructions for authors are published in the journal pages and could be accessed at the web site of the journal - www.advancedotology.org.

Contents

Original Articles

- 179 Protective Effect of Ginkgo Biloba Extract on Gentamicin-Induced Structural Changes of Calcite-Gelatin Composite Chul Ho Jang, Yong Beom Cho, Jong Kook Lee
- 183 Effect of Cadmium on Human Middle Ear Epithelial Cells Jae Jun Song, Ju Yeon Kim, An Soo Jang, Shin Hye Kim, Yoon Chan Rah, Mina Park, Moo Kyun Park
- 188 Effect of Mitomycin C on bFGF, TGF-β1, KGF-1 Expressions after Myringotomy: An Animal Study Hatice Durak, Sinan Atmaca, Mehmet Önder Karayiğit, Murat Yarım
- 192 Effect of Enoxaparin Sodium on Experimentally-Induced Myringosclerosis in Rats Murat Ayata, Zeynep Kaptan, Hakkı Uzunkulaoğlu, İlker Akyıldız, Arzu Tüzüner, Hatice Ünverdi, Hatice Karadaş
- 196 Assessment of Synaptic Plasticity via Long-Term Potentiation in Young Mice on the Day after Acoustic Trauma: Implications for Tinnitus Aslı Çakır, Mustafa Cenk Ecevit, Ramazan Bal, Selhan Gürkan, Hayrettin Cengiz Alpay, Mustafa Bülent Şerbetçioğlu
- 202 Effect of Transtympanic Injection of Melatonin on Cisplatin-Induced Ototoxicity Mehmet Gökhan Demir, Niyazi Altıntoprak, Sedat Aydın, Ebru Kösemihal, Kayhan Başak
- 207 Evaluation of Lapatinib and Trastuzumab for Ototoxic Effects Aylin Eryılmaz, Buket Demirci, Ceren Günel, Nuket Eliyatkın, Safiye Aktaş, İmran Kurt Ömürlü, Yeşim Başal, Mehmet Sağıroğlu, Barış Ermişler, Sema Basak
- 212 Effects of Long-Term Speech-in-Noise Training in Air Traffic Controllers and High Frequency Suppression. A Control Group Study María Teresa Pérez Zaballos, Ángel Ramos de Miguel, Daniel Pérez Plasencia, María Luisa Zaballos González, Ángel Ramos Macías
- 218 Quality of Life in Pediatric Cochlear Implantations Meysem Yorgun, Özgür Sürmelioğlu, Ülkü Tuncer, Özgür Tarkan, Süleyman Özdemir, Erdinç Çekiç, Fikret Çetik, Mete Kıroğlu
- 222 The Effect of Reference Electrode Position in Cochlear Implants Angel Ramos-Miguel, Angel Ramos-Macías, Jaime Viera Artiles, María Teresa Perez Zaballos
- 229 Satisfaction of Children with Auditory Neuropathy and Cochlear Implant Guilherme Machado de Carvalho, Thiago M. Zago, Priscila Z. Ramos, Arthur M. Castilho, Alexandre C. Guimarães, Edi L. Sartorato
- 236 Cortical Evoked Potentials and Hearing Aids in Individuals with Auditory Dys-Synchrony Pradeep Yuvaraj, Jayaram Mannarukrishnaiah
- 243 Effect of Contralateral Noise on Acoustic Reflex Latency Measures Prashanth Prabhu, Koratagere Narayanaswamy Divyashree, Raju Neeraja, Sivaswami Akhilandeshwari
- 248 Validity and Test-Retest Reliability of the Dutch Version of the Chronic Otitis Media Questionnaire 12 (COMQ-12) Joost van Dinther, Valerie Droessaert, Sophie Camp, Robby Vanspauwen, Youri Maryn, Andrzej Zarowski, Thomas Somers, Erwin Offeciers
- 253 The Effects of Topical Burow's and Castellani's Solutions on the Middle Ear Mucosa of Rats Yeşim Başal, Ceren Günel, Aylin Eryılmaz, İbrahim Tuğrul, Ali Toka, Furuzan Kaçar, Sema Başak

Review

257 Auditory Processing Disorder (APD): Progress in Diagnostics So Far. A Mini-Review on Imaging Techniques Lara Angelle Micallef

Case Reports

- 262 Lymphoma of the Internal Auditory Canal Presenting as Facial Palsy, Vertigo, and Hearing Loss Namhyung Ryou, Dong-yn Ko, Hyung Jin Jun, Sung Won Chae
- 264 Isolated Myxoma in the External Auditory Canal of a 10-Year-Old Girl Dong-Hee Lee, Su Hee Jeong, Hojong Kim, Eunhye Shin
- 267 Treatment for Progressive Hearing Loss Due to Paget's Disease of Bone A Case Report and Literature Review Mitsuhiro Aoki, Shigeaki Tanahashi, Keisuke Mizuta, Hiroki Kato

Letter to the Editor

271 Considerations when Analyzing Vestibular Evoked Myogenic Potential (VEMP) Outcomes Elicited by Chirp Stimulus in Healthy Participants Mohd Normani Zakaria, Zuraida Zainun, Cheu Lih Aw