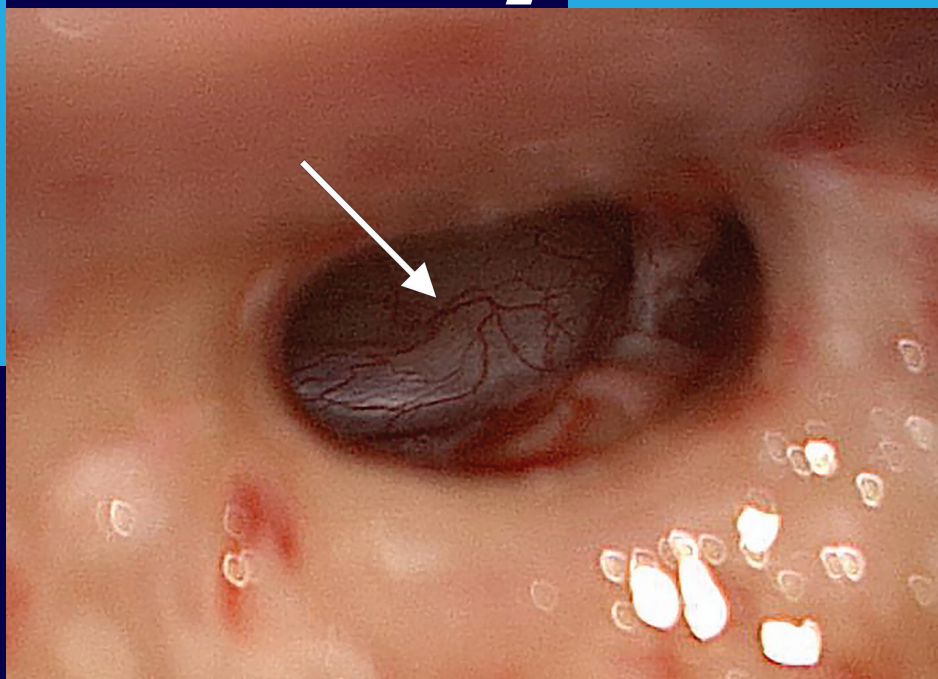


The Journal of International Advanced JIAO Otology



Microscopic view of the PSA (arrowhead) obscuring the round window niche
(Page 463)

Vol.16 • Issue 3 • December 2020

The Journal of International
Advanced Otology is fully
sponsored and owned by

EAONO
European Academy of
Otology & Neuro-Otology



Indexed In

PubMed
SCI EXPANDED

Member of



EDITOR

O. Nuri Özgirgin

Bayındır Hospital, Ankara, Turkey

ASSOCIATE EDITORS

Manohar Bance 

University of Cambridge, Cambridge, UK

ORCID iD: 0000-0001-8050-3617

Arun Gadre 

Geisinger Medical Center, Danville, PA, USA

ORCID iD: 0000-0002-7784-5533

Arata Horii

Niigata University, Niigata City, Japan

Ja-Won Koo

Seoul National University Bundang Hospital, Seongnam-si, Korea

Luiz Fernando Lourenço

University of Sao Paulo, Sao Paulo, Brasil

Bülent Satar 

University of Health Sciences, Gülhane Medical School, Ankara, Turkey

ORCID iD: 0000-0002-1079-2393

Robby Vanspauwen 

Sint-Augustinus Antwerp European Institute For ORL, Wilrijk, Belgium

ORCID iD: 0000-0001-8044-9358

The Journal of International Advanced Otology
is fully sponsored and owned by



European Academy of
Otology & Neuro-Otology



Address for correspondence

Mailing address: 2610 Antwerp,

Oosterveldlaan 24, Belgium

URL: www.advancedotology.org

E-mail: jiao@advancedotology.org

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

Copyright © All rights reserved.

ISSN 1308-7649

E ISSN 2148-3817

Founded by MSOA



ADMINISTRATIVE ADVISORY BOARD

Manohar Bance
Dalhousie University, Halifax Nova Scotia, Canada

Maurizio Barbara
Sapienza University, Sant'Andrea Hospital, Rome, Italy

Chunfu Dai
University of Shanghai, Shanghai, China

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

Arnaud Deveeze
Clinique Clairval, Marseille, France

Neil Donnelly
Spire Cambridge Lea Hospital, Cambridge, UK

Arun Gadre
Geisinger Medical Center, Danville, PA, USA

Karl-Bernd Huttenbrink
University of Koln, Köln, Germany

Ja-Won Koo
Seoul National University Bundang Hospital, Seongnam-si, Korea

Hiroimi Kojima
Jikei University, Tokyo, Japan

Thomas Lenarz
Medizinische Hochschule Hannover, Hannover, Germany

Jacques Magnan
Causse Ear Clinic, Beziers, France

Manoj Manikoth
Chinmaya Womens College, Kannur, India

Jeff Mulder
Radboud University Hospital, Nijmegen, The Netherlands

Gerry O'Donoghue
Queens Medical Centre, Nottingham, UK

F. Erwin Offeciers
Sint-Augustinus Hospital University, Wilrijk, Belgium

Stephen O'Leary
University of Melbourne, Melbourne, Australia

Milan Profant
Department of Otorhinolaryngology, Bratislava University, Bratislava, Slovakia

Blake Papsin
University of Toronto, Toronto, Canada

Angel Ramos
University Hospital Insular, Las Palmas, Spaim

Jay Rubinstein
UW Medicine's Head and Neck Surgery Center, Washington D.C., USA

Shakeel Saeed
University College London, London, United Kingdom

Bülent Satar
GATA Medical School, Ankara, Turkey

Samuel Selesnick
Weill Cornell Medical College, New York, USA

Thomas Somers
Sint-Augustinus Hospital University, Wilrijk, Belgium

Holger Sudhoff
Bielefeld Academic Teaching Hospital, Muenster University, Bielefeld, Germany

Per Caye Thomasen
Gentofte University Hospital, Hellerup, Denmark

Franco Trabalzini
University of Siena, Siena, Italy

Robby Vanspauwen
Department of Ear Nose Throat, Sint-Augustinus Antwerp European Institute For ORL, Wilrijk, Belgium

EDITORIAL CONSULTANTS

Soo-Keun Kong
Pusan National University Hospital, Busan, Korea

Ann Halleman
University of Antwerp, Wilrijk, Belgium

Pınar Yalınay Dikmen
Acibadem University, İstanbul, Turkey

Neşe Çelebisoy
Ege University, İzmir, Turkey

Jeong Hun Jang
Ajou University Hospital, Suwon, Korea

Ja-Won Koo
Seoul National University Bundang Hospital, Seongnam-si, Korea

Münir Demir Bajin
Hacettepe University School of Medicine, Ankara, Turkey

Fouad El Fata
Balamand University, Beirut, Lebanon

Luc Vereeck
University of Antwerp, Wilrijk, Belgium

Shuji Izumi
Niigata University Graduate School of Medical and Dental Sciences, Niigata City, Japan

Eric Vente
De Praktijk PEMVente, Alphen aan den Rijn, The Netherlands

Kuniyuki Takahashi
Niigata University, Niigata City, Japan

Yuka Morita
Niigata University, Niigata City, Japan

Yutaka Yamamoto
The Jikei University, Tokyo, Japan

Kemal Görür
Mersin University, Mersin, Turkey

Denis Ayache
Fondation Adolphe de Rothschild, Paris, France

Mathieu Marx
Paul-Sabatier Toulouse 3 University, Toulouse, France

Salman Alhabib
King Khalid Hospital, King Saud University, Riyadh, Saudi Arabia

Alain Moukheiber
University of Montreal, Quebec, Canada

Michael Chi-fai Tong
The Chinese University of Hong Kong, Hong Kong, China

Marc-Elie Nader
MD Anderson Cancer Center, Texas, USA

Angelique Van Ombergen
University of Antwerp, Antwerp, Belgium

Maxime Maheu
Oregon Health & Science University, Oregon, USA

Andy Beynon
Radboud University Nijmegen, Nijmegen, The Netherlands

Soly Erlandsson
University West, Trollhättan, Sweden

Jan Casselman
AZ Sint-Jan, Brugge, Belgium

Ayça Ant
Ankara Oncology Training and Research Hospital, Ankara Turkey

Jerzy Kuczkowski
Medical University of Gdansk, Gdansk, Poland

Yildirim A. Bayazit
İstanbul Medipol University, İstanbul, Turkey

Paweł Jastreboff
Emory School of Medicine, Ellicott City, USA

Istvan Sziklai
University of Debrecen, Debrecen, Hungary

Masahiro Komori
Kochi University School of Medicine, Kochi, Japan

Ricardo Ceballos-Lizarraga
The Vestibular Project - ABC Medical Center, Mexico City, Mexico

Sylvette Wiener-Vacher
Hopital Robert Debré, Paris, France

James Colebatch

UNSW Sydney, Sydney, Australia

Robert Stokroos

Maastricht UMC, Maastricht, The Netherlands

Alexandre Bisdorff

Centre Hospitalier Emile Mayrisch, Esch-sur-Alzette, Luxembourg

Neil Longridge

Vancouver General Hospital, British Columbia, Canada

Shinichi Haginomori

Osaka Medical College, Osaka, Japan

Raymond van de Berg

UMC Maastricht, Maastricht, The Netherlands

Michael Strupp

University Clinic Großhadern, Munich, Germany

Jeremy Hornibrook

Christchurch Hospital, Christchurch, New Zealand

Robert Gürkov

University Hospital Munich, Munich, Germany

Art Mallinson

Vancouver General Hospital, Vancouver, Canada

Bart Vinck

Ghent University, Ghent, Belgium

Anne E. Hogan

Pacific University, Oregon, USA

Tjasse Bruintjes

Gelre Hospital Apeldoorn, Apeldoorn, The Netherlands

Naïma Deggouj

Université Catholique de Louvain (UCL), Woluwe-Saint-Lambert, Belgium

Shingo Murakami

Nagoya City University, Nagoya, Japan

Arata Horii

Niigata University Graduate School of Medical and Dental Sciences, Niigata City, Japan

Tadashi Kitahara

Nara Medical University, Nara, Japan

Issam Saliba

University of Montreal, Montreal, Canada

Hiroaki Sato

Iwate Medical University, Iwate, Japan

Michihiko Sone

Nagoya University, Nagoya, Japan

Nina Bozanic Urbancic

University Medical Centre Ljubljana, Ljubljana, Slovenia

Vedat Topsakal

University Hospital Antwerp, Edegem, Belgium

Tetsuya Tono

Miyazaki Medical College, Miyazaki, Japan

George Tavartkiladze

National Research Centre for Audiology and Hearing Rehabilitation, Moscow, Russia

Avi Shupak

Lin and Carmel Medical Centers, Technion - Israel Institute of Technology, Haifa, Israel

Pascal Senn

University of Geneva, Geneva, Switzerland

John Rutka

Toronto General Hospital, Toronto, Canada

Giampietro Ricci

University of Perugia, Perugia, Italy

Milan Profant

University nemocnica Bratislava, Bratislava, Slovakia

Gerry O'Donoghue

Queens Medical Centre, Nottingham, United Kingdom

Daniel Nuti

Università degli Studi di Siena, Siena, Italy

Marcus Neudert

Technische Universität Dresden, Dresden, Germany

Badr Eldin Mostafa

Ain-Shams University, Cairo, Egypt

Hidemi Miyazaki

Kyosai Hospital, Tokyo, Japan

Paul Merkus

Amsterdam University Medical Center, Amsterdam, The Netherlands

Daniele Marchioni

University of Verona, Verona, Italy

Salah Mansour

Westmount Square ENT Clinic, Quebec, Canada

Mans Magnusson

University of Lund, Lund, Sweden

Thomas Lenarz

Medizinische Hochschule Hannover, Hannover, Germany

Sergey Kosyakov

Russian Medical Academy for Postgraduate Education, Moscow, Russia

Hiromi Kojima

Jikei University, Tokyo, Japan

Seiji Kakehata

Yamagata University, Yamagata, Japan

Adrian James

The Hospital for Sick Children, Ontario, Canada

Margriet A. Huisman

Leiden University, Leiden, The Netherlands

Imre Gerlinger

University of Pécs, Pécs, Hungary

Bernard Fraysse

University of Toulouse, Toulouse, France

Peter Franz

Rudolfstiftung Teaching Hospital, Vienna, Austria

Jose Lopez Escamez

Hospital Universitario Virgen de las Nieves, Granada, Spain

Neil Donnelly

Cambridge University Hospitals, Cambridge, United Kingdom

Norbert Dillier

University Hospital Zürich, Zürich, Switzerland

Aarno Dietz

Kuopio University Hospital, Kuopio, Finland

Arnaud Deveze

Clinique Clairval, Marseille, France

Olivier Deguine

University of Toulouse, Toulouse, France

Angel Ramos de Miguel

Universidad Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain

Chunfu Dai

Fudan University, Shanghai, China

Vincent Cousins

The Alfred Hospital, Melbourne, Australia

Augusto Casani

Pisa University Hospital, Pisa, Italy

Srećko Branica

University of Zagreb, Zagreb, Croatia

Anirban Biswas

Vertigo and Deafness Clinic, Kolkata, India

Dirk Beutner

HNO-Universitätsklinik Köln, Köln, Germany

Daniele Bernardeschi

GH Pitié Salpêtrière, Paris, France

Ricardo Bento

University of Sao Paulo, San Paulo, Brazil

Nenad Arsovic

Belgrade ORL Clinic, Belgrade, Serbia

Mehmet Ada

Istanbul University-Cerrahpaşa, Cerrahpaşa School of Medicine, Istanbul, Turkey

Fatthi Abdel Baki

University of Alexandria, Alexandria, Egypt

Graziela Souza Queiroz Martins

University of Sao Paulo, San Paulo, Brazil

Rudi Kuhweide

AZ St.Jan Brugge-Oostende a.v., Brugge, Belgium

Bruce Black

Queensland Children's Hospital, Brisbane, Australia

Marco Mandala

University of Siena, Siena, Italy

Nicolas Perez
University of Navarra, Madrid, Spain

Nuri Özgürin
Bayındır Hospital, Ankara, Turkey

Ahmet Ataş
İstanbul University-Cerrahpaşa, Cerrahpaşa School
of Medicine, İstanbul, Turkey

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

Antonio della Volpe
Santobono Pausilipon Children's Hospital, Napoli,
Italy

Armağan İncesulu
Eskişehir Osmangazi University, Eskişehir, Turkey

Arun K. Gadre
Geisinger Medical Center, Danville, USA

Asım Aslan
Manisa Celal Bayar University, Manisa, Turkey

Aydan Genç
Hacettepe University School of Health Sciences,
Ankara, Turkey

Ayşe Sanem Sahli
Hacettepe University, Ankara, Turkey

Aziz Belal
Alex Ear Center, Alexandria, Egypt

Bernard Ars
University of Namur, Namur, Belgium

Blake Papsin
University of Toronto, Toronto, Canada

Bruce Edwards
HCG Audiology, Allen Park, USA

Bülent Şerbetçioğlu
İstanbul Medipol University, İstanbul, Turkey

Carlos Cenfor Español
Fundacion Jimenez Diaz - Clinica Nuestra Senora
Concepcion, Madrid, Spain

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

Cem Uzun
Trakya University, Edirne, Turkey

Constantino Morera
University of Valencia, Valencia, Spain

Cüneyt Alper
University of Pittsburgh School of Medicine,
Pennsylvania, USA

Daniel Jiang
St Thomas' Hospital, London, United Kingdom

Daniel Kaplan
Ben Gurion University, Beer Sheva, Israel

Diego Zanetti
University of Milano, Milano, Italy

Enis Alpin Güneri
Dokuz Eylül University, İzmir, Turkey

Eric Truy
University of Lyon, Lyon, France

Ewa Olszewska
Medical University of Bialystok, Bialystok, Poland

F. Erwin Offeciers
Sint-Augustinus Hospital University, Wilrijk,
Belgium

Fazıl Necdet Ardiç
Pamukkale University, Denizli, Turkey

Franco Trabalzini
University of Siena, Siena, Italy

Haruo Takahashi
Nagasaki Harbor Medical Center, Nagasaki, Japan

Henryk Skarzynski
World Hearing Center, Warsaw, Poland

Herman Jenkins
University of Colorado, Denver, USA

İbrahim Hızalan
Novomed ENT Center, Bursa, Turkey

İrfan Devranoğlu
İstanbul University, İstanbul, Turkey

Jacques Magnan
Causse Ear Clinic, Beziers, France

Jef Mulder
Radboud University Medical Center, Nijmegen, The
Netherlands

John Dornhoffer
UAMS Medical Center, Arkansas, USA

Levent Olgun
İzmir Bozyaka Hospital, İzmir, Turkey

Levent Naci Özlüoğlu
Baskent University, Ankara, Turkey

Manohar Bance
University of Cambridge, Cambridge, United
Kingdom

Manuel Manrique
University of Navarra, Pamplona, Spain

Mario Sanna
Gruppo Otologico, Piacenza, Italy

Maurizio Barbara
Sapienza University, Rome, Italy

Mesut Akyol
Ankara Yıldırım Beyazıt University, Ankara, Turkey

Mete Kiroğlu
Çukurova University, Adana, Turkey

Miguel Aristegui
Hospital General Universitario Gregorio Marañon,
Madrid, Spain

Mislav Gjurić
Sinteza Clinic, Zagreb, Croatia

Mohan Kameswaran
Madras ENT Research Foundation, Chennai, India

Nicola Quaranta
University of Bari, Bari, Italy

Onur Çelik
Manisa Celal Bayar University, Manisa, Turkey

Onur Odabaşı
Kent Hospital, İzmir, Turkey

Orhan Yılmaz
Karabük University, Karabük, Turkey

P. Ashley Wackym
Rutgers Robert Wood Johnson Medical School, New
Jersey, USA

Paul Van de Heyning
University of Antwerp, Antwerp, Belgium

Per Caye Thomassen
Gentofte University Hospital, Hellerup, Denmark

Robert Briggs
Royal Victorian Eye and Ear Hospital, Melbourne,
Australia

Robin Youngs
Gloucestershire Royal Hospital, Gloucestershire,
United Kingdom

Roland Laszig
University of Freiburg, Freiburg, Germany

Ronen Perez
Shaare Zedek Medical Center, Jerusalem, Israel

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

Saba Battelino
University Of Ljubljana, Ljubljana, Slovenia

Sertaç Yetişer
Anadolu Hospital, İstanbul, Turkey

Seung Ha Oh
Seoul National University Hospital, Seoul, Korea

Songül Aksoy
Hacettepe University, Ankara, Turkey

Stefan Plontke
Martin Luther University Halle-Wittenberg, Halle
(Saale), Germany

Stephen Wetmore
University West Virginia Medical Center, West
Virginia, USA

Tayfun Kirazlı
Ege University, İzmir, Turkey

Thomas Linder

University of Luzern, Luzerner Kantonsspital, Luzern,
Switzerland

Thomas Nikolopoulos

University of Athens, Athens, Greece

Thomas Somers

Sint-Augustinus Hospital University, Wilrijk, Belgium

Udi Cinamon

Edith Wolfson Medical Center, Holon, Israel

Vincent Darrouzet

Hospital Pellegrin, Bordeaux, France

Wilko Grolman

University of Utrecht, Utrecht, The Netherlands

Yukiko Iino

Tokyo Kita Medical Center, Tokyo, Japan

Bülent Satar

Gülhane Medical School, Ankara, Turkey

Holger Sudhoff

Bielefeld University, Bielefeld, Germany

Masafumi Sakagami

Hyoto College of Medicine, Nishinomiya, Japan

Nazım Korkut

Acibadem Maslak Hospital, İstanbul, Turkey

Rinze A. Tange

University of Utrecht, Utrecht, The Netherlands

Floris Wuyts

University Hospital Antwerp, Edegem, Belgium

Herman Kingma

University of Maastricht, Maastricht, The
Netherlands

Ad Snik

University of Nijmegen, Nijmegen, The Netherlands

Jean-Philippe Guyot

University of Geneva, Geneva, Switzerland

Cor Cremers

Radboud University Nijmegen, Nijmegen, The
Netherlands

Gino Marioni

University of Padova, Padova, Italy

Alec Fitzgerald O'Connor

St Thomas' Hospital, London, United Kingdom

Antonio Quaranta

University of Bari, Bari, Italy

Fabio Piazza

University of Parma, Parma, Italy

Gerard O'Donoghue

Queen's Medical Centre, University Hospital,
Nottingham, United Kingdom

Jan W. Casselman

AZ St. Jan Brugge-Oostende AV, Brugge, Belgium

John S. Oghalai

Stanford School of Medicine, Stanford, USA

Livio Presutti

Policlinico University of Modena, Modena, Italy

Maviş Kulak Kayıkçı

Hacettepe University, Ankara, Turkey

Michal Luntz

Bnai Zion Medical Center, Haifa, Israel

Paul Kileny

University of Michigan, Michigan, USA

Robert Vincent

Causse Ear Clinic, Béziers-Colombiers, France

Shakeel Saeed

University College London, London, United Kingdom

Stephen O'Leary

University of Melbourne, Melbourne, Australia

Suat Özbilen

Gazi University, Ankara, Turkey

Sugata Takahashi

University of Niigata, Niigata, Japan

Sun O Chang

Seoul National University Hospital, Seoul, Korea

Tuncay Uluğ

İstanbul University, İstanbul, Turkey

Wolf-Dieters Baumgartner

University Clinic Vienna, Vienna, Austria

Istvan Sziklai

University of Debrecen, Debrecen, Hungary

Milan Stankovic

University of Nis, Nis, Serbia

Gerald Popelka

Stanford University, California, USA

Bruce Edwards

University of Michigan, Michigan, USA

Pittayapon Pitathawatchai

Prince of Songkla University, Chang Wat Songkhla,
Thailand

Yibo Zhang

Fudan University, Shanghai, China

Gregory J. Basura

University of Michigan, Michigan, USA

Anil K. Lalwani

Columbia University Medical Center, New York, USA

Hussam El-Kashlan

University of Michigan, Michigan, USA

Brandon Isaacson

UT Southwestern Medical Center, Texas, USA

Steven Telian

University of Michigan, Michigan, USA

Soumit Dasgupta

Alderhey Children's Hospital, Liverpool, United Kingdom

Sung Won Chae

Korea University Medical Center, Seoul, Korea

Yang-Sun Cho

Samsung Medical Center, Seoul, Korea

Hyung-Ho Cho

Chonnam National University, Gwangju, Korea

Jae Young Choi

Yonsei University, Seoul, Korea

Byung Yoon Choi

Seoul National University Bundang Hospital,
Gyeonggi-do, Korea

Yun-Hoon Choung

Ajou University, Gyeonggi-do, Korea

Jong Woo Chung

Asan Medical Center, Seoul, Korea

Won Ho Chung

Samsung Medical Center, Seoul, Korea

Gyu Cheol Han

Gacheon University, Gyeonggi-do, Korea

Sung Kwang Hong

Hallym University, Gangwon-do, Korea

Gi Jung Im

Korea University Medical Center, Seoul, Korea

Chul Ho Jang

Chonnam National University, Gwangju, Korea

Jung Hun Jang

Ajou University, Gyeonggi-do, Korea

Eun Ju Jeon

The Catholic University of Korea, Seoul, Korea

Jae Yun Jung

Dankook University, Yongin-si, Korea

Jin Se Jung

Yonsei University, Seoul, Korea

Woo Seok Kang

Asan Medical Center, Seoul, Korea

Kyu Sung Kim

Inha University, Incheon, Korea

Young Ho Kim

Seoul National University, Seoul, Korea

Sung Huhn Kim

Yonsei University, Seoul, Korea

Chang Hee Kim

Kunkook University, Seoul, Korea

Soo-Keun Kong

Pusan National University Hospital, Busan, Korea

Jun Ho Lee

Seoul National University, Seoul, Korea

JIAO

The Journal of International Advanced Otology

Il Woo Lee

Pusan National University Hospital, Busan, Korea

Kyu Yeop Lee

Kyungpook National University, Daegu, Korea

Dong Hee Lee

The Catholic University of Korea, Seoul, Korea

Hyo Jung Lee

Hallym University, Gangwon-do, Korea

Jong Dae Lee

Soon Chun Hyang University, Chungcheongnam-do, Korea

Il Joon Moon

Samsung Medical Center, Seoul, Korea

In Seok Moon

Yonsei University, Seoul, Korea

Kyung Ho Park

The Catholic University of Korea, Seoul, Korea

Shi Nae Park

The Catholic University of Korea, Seoul, Korea

Moo Kyun Park

Seoul National University Hospital, Seoul, Korea

Min Hyun Park

Seoul National University, Seoul, Korea

Hong Ju Park

Asan Medical Center, Seoul, Korea

Yong-Ho Park

Choongnam National University, Daejeon, Korea

Yoon Chan Rah

Korea University Medical Center, Seoul, Korea

Eun Jin Son

Yonsei University, Seoul, Korea

Jae-Jun Song

Korea University Medical Center, Seoul, Korea

Jae Jin Song

Seoul National University Bundang Hospital, Seoul, Korea

Myung-Whan Suh

Seoul National University Hospital, Seoul, Korea

Seung Geun Yeo

Kyunghee University, Gyeonggi, Korea

Franck Assaban

Virtualis Company, Pérols, France

Kamran Barin

The Ohio State University, Ohio, USA

Mario Faralli

University of Perugia, Perugia, Italy

Maria Paola Guidi

University of Ferrara, Ferrara, Italy

Amir Kheradmand

Hopkins Medicine, Maryland, USA

Ji So Kim

Seoul National University Medical Research Center, Seoul, Korea

Michel Lacour

Aix-Marseille University, Marseille, France

Leonardo Manzari

Rome University, Rome, Italy

Angelica Perez-Fornos

Geneva University, Geneva, Switzerland

Levent Sennaroğlu

Hacettepe University, Ankara, Turkey

Morgana Sluydts

Sint-Augustinus Hospital, Wilrijk, Belgium

Konstantin Trinus

International Academy for Ecology and Medicine, Kiev, Ukraine

Şinasi Yalçın

Firat University, Elazığ, Turkey

Maxim Zamergrad

Pirogov Russian National Research Medical University, Moscow, Russia

Andrzej Zarowski

Sint-Augustinus Antwerpen, Wilrijk, Belgium

David Zee

Hopkins Medicine, Maryland, USA

Hassan Haidar Ahmad

Hamad Medical Corporation, Doha, Qatar

Marcel Cosgarea

University of Medicine and Pharmacy of Craiova, Cluj-Napoca, Romania

Eva Orzan

IRCCS "Burlo Garofolo", Trieste, Italy

Witold Szyfter

Poznan University of Medical Sciences, Poznan, Poland



Publisher

İbrahim KARA

Publication Director

Ali ŞAHİN

Editorial Development

Gizem KAYAN TEKAÜT

Deputy Publication Director

Gökhan ÇİMEN

Publication Coordinators

İrem SOYSAL

Arzu YILDIRIM

Deniz KAYA

Bahar ALBAYRAK

Emre KARA

Finance and Administration

Zeynep YAKIŞIRER ÜREN

Betül ÇİMEN

Project Coordinators

Doğan ORUÇ

Sinem KOZ

Graphics Department

Ünal ÖZER

Deniz Elif DURAN

Beyzanur KARABULUT

Contact

Address: Büyükdere Cad.

No: 105/9 34394

Mecidiyeköy Şişli, İstanbul, Turkey

Phone: +90 212 217 17 00

Fax: +90 212 217 22 92

E-mail: info@avesyayincilik.com

Aims and Scope

The Journal of International Advanced Otology (J Int Adv Otol) is an international, peer reviewed, open access publication that is fully sponsored and owned by the European Academy of Otology and Neurotology and the Politzer Society. The journal is published triannually in April, August, and 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 academics who work in the fields of otology, neurotology, audiology and skull base medicine.

The editorial and publication processes of the journal are shaped in accordance with the guidelines of the International Committee of Medical Journal Editors (ICMJE), World Association of Medical Editors (WAME), Council of Science Editors (CSE), Committee on Publication Ethics (COPE), European Association of Science Editors (EASE), and National Information Standards Organization (NISO). The journal is in conformity with the Principles of Transparency and Best Practice in Scholarly Publishing (doaj.org/bestpractice).

The Journal of International Advanced Otology is indexed in Science Citation Index Expanded, PubMed/MEDLINE, Pubmed Central, EBSCO, PRO-QUEST, DOAJ, and SCOPUS.

Processing and publication are free of charge with the journal. No fees are requested from the authors at any point throughout the evaluation and publication process. All manuscripts must be submitted via the online submission system, which is available at www.advancedotology.org. The journal guidelines, technical information, and the required forms are available on the journal's web page.

J Int Adv Otol is funded by revenue generated by advertising as well as the support of the European Academy of Otology and Neurotology and the Politzer Society. Advertisement images are published only upon the Editor-in-Chief's approval.

Statements or opinions expressed in the manuscripts published in the journal reflect the views of the author(s) and not the opinions of the European Academy of Otology and Neurotology, Politzer Society, editors, editorial board, and/or publisher; the editors, editorial board, and publisher disclaim any responsibility or liability for such materials.

Journal of International Advanced Otology is an open access publication and the journal's publication model is based on Budapest Open Access Initiative (BOAI) declaration. Journal's archive is available online, free of charge at www.advancedotology.org. Journal of International Advanced Otology's content is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

Printed copies of the journal are distributed to the members of the European Academy of Otology and Neurotology and the Politzer Society, free of charge.

The journal is printed on an acid-free paper.



Editorial Office: Prof. Dr. O. Nuri Ozgirgin

Address: Bayındır Hospital, Söğütözü, Ankara, Turkey

Tel: +90 312 287 90 00 - int: 7811

Fax: +90 312 284 42 76

e-mail: ozgirgin@icloud.com

Publisher: AVES

Address: Büyükdere Cad. 105/9 34394 Mecidiyeköy, Şişli, İstanbul

Phone: +90 212 217 17 00

Fax: +90 212 217 22 92

Web page: avesyayincilik.com

E-mail: info@avesyayincilik.com

Instructions to Authors

Context

Journal of International Advanced Otolology (J Int Adv Otol) is an international, peer reviewed, open access publication that is fully sponsored and owned by the European Academy of Otolology and Neurotology and the Politzer Society. The journal is published triannually in April, August, and 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 Otolology 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.

Editorial and Publication Process

The editorial and publication processes of the journal are shaped in accordance with the guidelines of 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), and National Information Standards Organization (NISO). The journal conforms to the Principles of Transparency and Best Practice in Scholarly Publishing (doaj.org/bestpractice).

Originality, high scientific quality, and citation potential are the most important criteria for a manuscript to be accepted for publication. Manuscripts submitted for evaluation should not have been previously presented or already published in an electronic or printed medium. The journal should be informed of manuscripts that have been submitted to another journal for evaluation and rejected for publication. The submission of previous reviewer reports will expedite the evaluation process. Manuscripts that have been presented in a meeting should be submitted with detailed information on the organization, including the name, date, and location of the organization.

Peer-Review Policy

Manuscripts submitted to the Journal of International Advanced Otolology will go through a double-blind peer-review process. Each submission will be reviewed by at least two external, independent peer reviewers who are experts in their fields in order to ensure an unbiased evaluation process. The editorial board will invite an external and independent editor to manage the evaluation processes of manuscripts submitted by editors or by the editorial board members of the journal. The Editor in Chief is the final authority in the decision-making process for all submissions.

Ethical Principles

An approval of research protocols by the Ethics Committee in accordance with international agreements (World Medical Association Declaration of Helsinki "Ethical Principles for Medical Research Involving Human Subjects," amended in October 2013, www.wma.net) is required for experimental, clinical, and drug studies and for some case reports. If required, ethics committee reports or an equivalent official document will be requested from the authors. For manuscripts concerning experimental research on humans, a statement should be included that shows that written informed consent of patients and volunteers was obtained following a detailed explanation of the procedures that they may undergo. For studies carried out on animals, the measures taken to prevent pain and suffering of the animals should be stated clearly. Information on patient consent, the name of the ethics committee, and the ethics committee approval number should also be stated in the Materials and Methods section of the manuscript. It is the authors' responsibility to carefully protect the patients' anonymity. For photographs that may reveal the identity of the patients, signed releases of the patient or of their legal representative should be enclosed.

Plagiarism

Journal of International Advanced Otology is extremely sensitive about plagiarism. All submissions are screened by a similarity detection software (iThenticate by CrossCheck) at any point during the peer-review and/or production process. Even if you are the author of the phrases or sentences, the text should not have unacceptable similarity with the previously published data.

When you are discussing others' (or your own) previous work, please make sure that you cite the material correctly in every instance.

In the event of alleged or suspected research misconduct, e.g., plagiarism, citation manipulation, and data falsification/fabrication, the Editorial Board will follow and act in accordance with COPE guidelines.

Preprint

Journal of International Advanced Otology does not consider preprint publications as prior publication. In other words, authors are allowed to present and discuss their findings on a non-commercial preprint server before submission to a journal.

Authors must provide the journal with the pre-print server deposition of their article accompanying its DOI during initial submission.

If the article is published in the Journal of International Advanced Otology, it is the responsibility of the authors to update the archived preprint and link it to the published version of the article.

Authorship

Each individual listed as an author should fulfill the authorship criteria recommended by the International Committee of Medical Journal Editors (ICMJE - www.icmje.org). The ICMJE recommends that authorship be based on the following 4 criteria:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work;
AND
2. Drafting the work or revising it critically for important intellectual content; AND
3. Final approval of the version to be published; AND
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

In addition to being accountable for the parts of the work he/she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work. In addition, authors should have confidence in the integrity of the contributions of their co-authors.

All those designated as authors should meet all four criteria for authorship, and all who meet the four criteria should be identified as authors. Those who do not meet all four criteria should be acknowledged in the title page of the manuscript.

Authors are required to provide their contributions to the manuscript in the Copyright Agreement and Authorship Form which can be downloaded at <http://www.advancedotology.org/eng>. If the editorial board suspects a case of "gift authorship," the submission will be rejected without further review. As part of the submission of the manuscript, the corresponding author should also 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.

Declaration of Interest

Journal of International Advanced Otology requires and encourages the authors and the individuals involved in the evaluation process of submitted manuscripts to disclose any existing or potential conflicts of interests, including financial, consultant, and institutional, that might lead to potential bias or a conflict of interest. Any financial grants or other support received for a submitted study from individuals or institutions should be disclosed to the Editorial Board. To disclose a potential conflict of interest, the ICMJE Potential Conflict of Interest Disclosure Form should be filled in and submitted by all contributing authors. Cases of a potential conflict of interest of the editors, authors, or reviewers are resolved by the journal's Editorial Board within the scope of COPE and ICMJE guidelines.

The Editorial Board of the journal handles all appeal and complaint cases within the scope of COPE guidelines. In such cases, authors should get in direct contact with the editorial office regarding their appeals and complaints. When needed, an ombudsperson may be assigned to resolve cases that cannot be resolved internally. The Editor in Chief is the final authority in the decision-making process for all appeals and complaints.

Copyright and License

Journal of Interventional Advanced Otology requires each submission to be accompanied by a Copyright License Agreement (available for download <http://www.advancedotology.org>). When using previously published content, including figures, tables, or any other material in both print and electronic formats, authors must obtain permission from the copyright holder. Legal, financial and criminal liabilities in this regard belong to the author(s). By signing the Copyright License Agreement, authors retain copyright of their work and agree that the article, if accepted for publication by the Journal of Interventional Advanced Otology, will be licensed under a Creative Commons Attribution-Non Commercial 4.0 International License (CC BY-NC).

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, or 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 content rests with the authors.

MANUSCRIPT PREPARATION

The manuscripts should be prepared in accordance with ICMJE-Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals (updated in December 2019 - <http://www.icmje.org/icmje-recommendations.pdf>). Authors are required to prepare manuscripts in accordance with the CONSORT guidelines for randomized research studies, STROBE guidelines for observational original research studies, STARD guidelines for studies on diagnostic accuracy, PRISMA guidelines for systematic reviews and meta-analysis, ARRIVE guidelines for experimental animal studies, and TREND guidelines for non-randomized public behavior.

Manuscripts can only be submitted through the journal's online manuscript submission and evaluation system, available at www.advancedotology.org. Manuscripts submitted via any other medium will not be evaluated.

Manuscripts submitted to the journal will first go through a technical evaluation process where the editorial office staff will ensure that the manuscript has been prepared and submitted in accordance with the journal's guidelines. Submissions that do not conform to the journal's guidelines will be returned to the submitting author with technical correction requests.

Authors are required to submit the following:

- Author Contribution and Copyright Agreement Form,
- ICMJE Potential Conflict of Interest Disclosure Form (should be filled in by all contributing authors) during the initial submission. These forms are available for download at www.advancedotology.org.

Preparation of the Manuscript

Title page: A separate title page should be submitted with all submissions and this page should include:

- The full title of the manuscript as well as a short title (running head) of no more than 50 characters,
- Name(s), affiliations, highest academic degree(s), and ORCID IDs of the author(s),
- Grant information and detailed information on the other sources of support,
- Name, address, telephone (including the mobile phone number) and fax numbers, and email address of the corresponding author,
- Acknowledgment of the individuals who contributed to the preparation of the manuscript but who do not fulfill the authorship criteria.

Abstract: An abstract should be submitted with all submissions except for Letters to the Editor. The abstract of Original Articles should be structured with subheadings (Objectives, Materials and Methods, Results, and Conclusion). Please check Table 1 below for word count specifications.

Keywords: Each submission must be accompanied by a minimum of three to a maximum of six keywords for subject indexing at the end of the abstract. The keywords should be listed in full without abbreviations. The keywords should be selected from the National Library of Medicine, Medical Subject Headings database (<https://www.nlm.nih.gov/mesh/MBrowser.html>).

Manuscript Types

Original Articles: This is the most important type of article since it provides new information based on original research. The main text of original articles should be structured with Introduction, Materials and Methods, Results, Discussion, and Conclusion subheadings. Please check Table 1 for the limitations for Original Articles.

Statistical analysis to support conclusions is usually necessary. Statistical analyses must be conducted in accordance with international statistical reporting standards (Altman DG, Gore SM, Gardner MJ, Pocock SJ. Statistical guidelines for contributors to medical journals. *Br Med J* 1983; 7; 1489-93). Information on statistical analyses should be provided with a separate subheading under the Materials and Methods section and the statistical software that was used during the process must be specified.

Units should be prepared in accordance with the International System of Units (SI).

Editorial Comments: Editorial comments aim to provide a brief critical commentary by reviewers with expertise or with high reputation in the topic of the research article published in the journal. Authors are selected and invited by the journal to provide such comments. Abstract, Keywords, and Tables, Figures, Images, and other media are not included.

Review Articles: Reviews prepared by authors who have extensive knowledge on a particular field and whose scientific background has been translated into a high volume of publications with a high citation potential are welcomed. These authors may even be invited by the journal. Reviews should describe, discuss, and evaluate the current level of knowledge of a topic in clinical practice and should guide future studies. The main text should contain Introduction, Clinical and Research Consequences, and Conclusion sections. Please check Table 1 for the limitations for Review Articles.

Case Reports: There is limited space for case reports in the journal and reports on rare cases or conditions that constitute challenges in diagnosis and treatment, those offering new therapies or revealing knowledge not included in the literature, and interesting and educative case reports are accepted for publication. The text should include Introduction, Case Presentation, Discussion, and Conclusion subheadings. Please check Table 1 for the limitations for Case Reports.

Letters to the Editor: This type of manuscript discusses important parts, overlooked aspects, or lacking parts of a previously published article. Articles on subjects within the scope of the journal that might attract the readers' attention, particularly educative cases, may

also be submitted in the form of a "Letter to the Editor." Readers can also present their comments on the published manuscripts in the form of a "Letter to the Editor." Abstract, Keywords, and Tables, Figures, Images, and other media should not be included. The text should be unstructured. The manuscript that is being commented on must be properly cited within this manuscript.

Table 1. Limitations for each manuscript type

Type of manuscript	Word limit	Abstract word limit	Reference limit	Table limit	Figure limit
Original Article	3000	250 (Structured)	35	6	7 or total of 15 images
Review Article	5000	250	50	6	10 or total of 20 images
Case Report	1200	200	15	No tables	10 or total of 20 images
Letter to the Editor	500	No abstract	5	No tables	No media

Tables

Tables should be included in the main document, presented after the reference list, and they should be numbered consecutively in the order they are referred to within the main text. A descriptive title must 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 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 labeled (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 300 DPI. To prevent delays in the evaluation process, all submitted figures should be clear in resolution and large in size (minimum dimensions: 100 × 100 mm). Figure legends should be listed at the end of the main document.

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

When a drug, product, hardware, or software program is mentioned within the main text, product information, including the name of the product, the producer of the product, and city and the country of the company (including the state if in USA), should be provided in parentheses 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 the shortcomings of original articles should be mentioned in the Discussion section before the conclusion paragraph.

References

Both in-text citations and the references must be prepared according to the Vancouver style. While citing publications, preference should be given to the latest, most up-to-date publications. Authors are responsible for the accuracy of references. Journal titles should

be abbreviated in accordance with the journal abbreviations in Index Medicus/ MEDLINE/PubMed. If an ahead-of-print publication is cited, the DOI number should be provided. When there are six or fewer authors, all authors should be listed. If there are seven or more authors, the first six authors should be listed followed by "et al." In the main text of the manuscript, references should be cited using Arabic numbers in square brackets superscripts. The reference styles for different types of publications are presented in the following examples.

Journal Article: Rankovic A, Rancic N, Jovanovic M, Ivanović M, Gajović O, Lazić Z, et al. Impact of imaging diagnostics on the budget – Are we spending too much? *Vojnosanit Pregl* 2013; 70: 709-11.

Book Section: Suh KN, Keystone JS. Malaria and babesiosis. Gorbach SL, Barlett JG, Blacklow NR, editors. *Infectious Diseases*. Philadelphia: Lippincott Williams; 2004.p.2290-308.

Books with a Single Author: Sweetman SC. *Martindale the Complete Drug Reference*. 34th ed. London: Pharmaceutical Press; 2005.

Editor(s) as Author: Huizing EH, de Groot JAM, editors. *Functional reconstructive nasal surgery*. Stuttgart-New York: Thieme; 2003.

Conference Proceedings: Bengissson 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. pp.1561-5.

Scientific or Technical Report: Cusick M, Chew EY, Hoogwerf B, Agrón E, Wu L, Lindley A, et al. Early Treatment Diabetic Retinopathy Study Research Group. Risk factors for renal replacement therapy in the Early Treatment Diabetic Retinopathy Study (ETDRS), Early Treatment Diabetic Retinopathy Study *Kidney Int*: 2004. Report No: 26.

Thesis: Yılmaz B. Ankara Üniversitesindeki Öğrencilerin Beslenme Durumları, Fiziksel Aktiviteleri ve Beden Kitle İndeksleri Kan Lipidleri Arasındaki İlişkiler. H.Ü. Sağlık Bilimleri Enstitüsü, Doktora Tezi. 2007.

Manuscripts Accepted for Publication, Not Published Yet: Slots J. The microflora of black stain on human primary teeth. *Scand J Dent Res*. 1974.

Epub Ahead of Print Articles: Cai L, Yeh BM, Westphalen AC, Roberts JP, Wang ZJ. Adult living donor liver imaging. *Diagn Interv Radiol*. 2016 Feb 24. doi: 10.5152/dir.2016.15323. [Epub ahead of print].

Manuscripts Published 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: URL: [http:// www.cdc.gov/ncidod/EID/cid.htm](http://www.cdc.gov/ncidod/EID/cid.htm).

REVISIONS

When submitting a revised version of a paper, the author must submit a detailed "Response to the reviewers" that states point by point how each issue raised by the reviewers has been covered and where it can be found (each reviewer's comment, followed by the author's reply and line numbers where the changes have been made) as well as an annotated copy of the main document. Revised manuscripts must be submitted within 30 days from the date of the decision letter. If the revised version of the manuscript is not submitted within the allocated time, the revision option may be canceled. If the submitting author(s) believe that additional time is required, they should request this extension before the initial 30-day period is over.

Accepted manuscripts are copy-edited for grammar, punctuation, and format. Once the publication process of a manuscript is completed, it is published online on the journal's webpage as an ahead-of-print publication before it is included in its scheduled issue. A PDF proof of the accepted manuscript is sent to the corresponding author and their publication approval is requested within 2 days of their receipt of the proof.

Contents

Original Articles

- 297 | **Auditory Performance in Early Implanted Children with Cochleovestibular Malformation and Cochlear Nerve Deficiency**
Ilyia Ajmal Othman, Asma Abdullah, Goh Bee See, Cila Umat, Richard S. Tyler
- 303 | **Feasibility of Day Surgery for Cochlear Implantation under Conscious Sedation with Same-Day Fitting**
Ahmad M. Aldhafeeri, Shaza Saleh, Fida Almuhawwas, Abdulrahman Hagr
- 309 | **Ophthalmic Abnormalities among Children Treated with Cochlear Implants**
Ziya Ayhan, Serpil Mungan Durankaya, Gül Arıkan, Günay Kırkım, Aslı Çakır Çetin, Yüksel Olgun, Üzeyir Günenç, Enis Alpin Güneri
- 313 | **Bone Anchored Hearing Aids for the Treatment of Asymmetric Hearing Loss**
Luca Bruschini, Rachele Canelli, Andrea Morandi, Christina Cambi, Giacomo Fiacchini, Stefano Berrettini, Francesca Forli
- 318 | **Spiral Ganglions and Speech Perception in the Elderly. Which Turn of the Cochlea is the More Relevant? A Preliminary Study on Human Temporal Bones**
Arianna Di Stadio, Antonio della Volpe, Massimo Ralli, Fiammetta Korsch, Antonio Greco, Giampietro Ricci
- 323 | **Is it Beneficial to Treat Patients Presenting Three Weeks or Longer after the Onset of Sudden Sensorineural Hearing Loss?**
Itay Chen, Ohad Cohen, Chanan Shaul, Jean-Yves Sichel, Ronen Perez
- 328 | **Aging and the Relationship between Balance Performance, Vestibular Function and Somatosensory Thresholds**
Charlotte Johnson, Ann Hallemans, Evi Verbecque, Charlotte De Vestel, Nolan Herssens, Luc Vereeck
- 338 | **Predictive Factors for the Success of Intratympanic Dexamethasone Treatment of Acute Subjective Tinnitus**
Hyeon Sik Oh, Eun Sub Lee, Yong-Hwi An, Hyun Joon Shim
- 346 | **The Protective Effect of Nigella sativa Oil against Experimentally Induced Cisplatin Ototoxicity: An Animal Study**
Numan Kökten, Oğuz Kadir Eğilmez, Murat Erinc, A. Işın Doğan Ekici, Serkan Şerifler, Erdem Yeşilada, Mahmut Tayyar Kalcıoğlu
- 353 | **Influence of Changes in Bone-Conduction Thresholds on Speech Audiometry in Patients Who Underwent Surgery for Otosclerosis**
Agnieszka Wiatr, Maciej Wiatr
- 358 | **Validity and Test–Retest Reliability of the translated Stapesplasty Outcome Test 25 for Measurement of Disease-Specific Quality of Life in Patients with Otosclerosis**
Mascha Hildebrandt, Kasper Daugaard Larsen, Henrik Glad, Bjarki Djurhuus
- 362 | **Assessment of Hearing Function in Children with Inflammatory Bowel Disease**
Esra Polat, Zehra Çınar, Gonca Keskindemirci, Özgür Yiğit, Günsel Kutluk, Muhammet Türe, Tuğberk Akça, Esat Alkaya
- 367 | **Facial Nerve Dehiscence and Cholesteatoma: A Comparison between Decades**
Giampiero Gulotta, Annalisa Pace, Giannicola Iannella, Irene Claudia Visconti, Valeria Rossetti, Diletta Angeletti, Claudio Vicini, Antonio Greco, Giuseppe Magliulo
- 373 | **Magnetic Resonance Imaging of the Eustachian Tube and the Paratubal Structures in Patients with Unilateral Acquired Cholesteatoma**
Muammer Melih Şahin, Deniz Sözmén Cılız, Melih Çayönü, Seçil Kayalı Dinç, Şeyda Akbal, Süleyman Boynueğri, Adil Eryılmaz
- 378 | **Normative Data of Ocular Vestibular Evoked Myogenic Potentials in Response to Chirp Stimulus**
Ceren Karaçaylı, Fatma Ceyda Akın Öçal, Volkan Kenan Çoban, Bülent Satar
- 382 | **Hematological Findings in Patients with Acute Peripheral Facial Palsy**
Su Jin Kim, Ho Yun Lee

- 387 | **Effects of Adenoidectomy and Adenotonsillectomy on Tympanostomy Tube Reinsertion Based on Korean Population-Based National Sample Cohort Data**

Junhui Jeong, Hyunsun Lim, Tae Seong Eo, Kyuin Lee, Jangwon Oh, Hyun Seung Choi

Editorial

- 393 | **Cochlear Implant Outcome Reviews**

Jameel Muzaffar, Peter Monksfield, Manohar Bance

Reviews

- 395 | **Outcomes of Cochlear Implantation in Patients with Post-Meningitis Deafness: A Systematic Review and Narrative Synthesis**

Kaajal Singhal, Juhi Singhal, Jameel Muzaffar, Peter Monksfield, Manohar Bance

- 411 | **Cochlear Implantation Outcomes in Post Synaptic Auditory Neuropathies: A Systematic Review and Narrative Synthesis**

Daoud Chaudhry, Abdullah Chaudhry, Jameel Muzaffar, Peter Monksfield, Manohar Bance

- 432 | **Outcomes of Cochlear Implantation in Patients with Pendred syndrome: A Systematic Review and Narrative Synthesis**

Kirsty Biggs, Amy Lovett, Chris Metcalfe, Jameel Muzaffar, Peter Monksfield, Manohar Bance

- 443 | **Outcomes of Cochlear Implantation in Patients with Superficial Siderosis: A Systematic Review and Narrative Synthesis**

Abdullah Chaudhry, Daoud Chaudhry, Jameel Muzaffar, Gemma Crundwell, Peter Monksfield, Manohar Bance

- 456 | **Outcomes of Cochlear Implantation in Patients with Jervell and Lange-Nielsen Syndrome: A Systematic Review and Narrative Synthesis**

Chris Metcalfe, Jameel Muzaffar, Peter Monksfield, Manohar Bance

Case Reports

- 463 | **Successful Cochlear Implantation in the Face of Persistent Stapedial Artery: Surgical Technique and Imaging Features**

T. Logan Lindemann, Katie L. Austin, Arun K. Gadre

- 467 | **Unilateral Isolated Primary Cutaneous Amyloidosis of the External Auditory Canal**

Giuseppe Magliulo, Ludovica de Vincentiis, Annalisa Pace, Irene Claudia Visconti, Francesco Le Foche, Mara Riminucci, Alessandro Corsi

- 470 | **Seizure as Early Presentation of a Pneumocephalus after Cochlear Implant: A Case Report**

José María Palacios-García, Elena Vazquez-Becerra, Francisco Ropero-Romero, Serafín Sánchez-Gómez

- 473 | **Mastoid Dermoid Cyst**

Giovanni Pepe, Federica Canzano, Silvia Piccinini, Luigi Corcione, Maurizio Falcioni

- 477 | **Surgical Solution for the Transformation of the Percutaneous Bone Anchored Hearing Aid to a Transcutaneous System in Complicated Cases**

Zsófia Bere, Gabor Vass, Adam Perenyi, Zoltan Tobias, Laszlo Rovo

- 482 | **Isolated Eustachian Tube Osteoma: Common Lesion in Uncommon Site**

Pietro Canzi, Elena Carlotto, Marco Manfrin, Irene Avato, Matteo Nardo, Anna Maria Simoncelli, Fabio Pagella, Marco Benazzo

- 485 | **A Message from a Narrowed Internal Auditory Canal in a Patient with a Hyperpneumatized Petrous Bone**

Pierre Reynard, Eugen Ionescu, Aïcha Ltaief-Boudrigua, Hung Thai-Van

- 489 | **Reviewer List**