

Editorial

The Eustachian Tube Redefined



It consists of two parts: the first solidly connected with the temporal bone, close to the tympanic cavity; the second soft, partly ligamentous, partly cartilaginous, directed towards the nasopharynx.

—*Bartholomeus Eustachius, Epistola de Auditus Organis
(Examination of the Organ of Hearing), 1562, Rome*

Since its first description by Eustachius, the concept of the Eustachian tube as partly bony structure has taken deep roots in our understanding of its anatomy, function, and possible dysfunction. Microscopic and gross anatomical observations of the “bony tube” have made a distinction between “the protympanum,” a tympanic cavity structure, and a more anterior and inaccessible “bony Eustachian tube.” Endoscopic observation of that area allows a very different view of anatomy and renders this distinction arbitrary and irrelevant.

While the protympanum was once a difficult-to-access region of the middle ear, the adoption of middle-ear endoscopes and angled instrumentation has made direct viewing and access feasible. Indeed, by observing the protympanum from this perspective, it is clear that the bony Eustachian tube and the protympanum are essentially one and the same.

The Eustachian tube as viewed endoscopically does not have a bony portion. It is a fibrous/cartilaginous structure that stretches from the nasopharynx to the most anterior part of the tympanic cavity (the protympanum). Its two openings are strikingly similar cufflike protrusions into the relevant space. This new understanding allows a more clear and distinct anatomical description of an area that is increasingly accessible for surgical interventions.

Muaz Tarabichi, MD
American Hospital Dubai
PO Box 5566
Oud Mehta Road
Dubai, United Arab Emirates

Dennis S. Poe, MD, PhD
Harvard Medical School
243 Charles Street
Boston, MA 02114, USA

Department of Otolaryngology
and Communications Enhancement
Boston Children’s Hospital, BCH 3129
300 Longwood Avenue
Boston, MA 02115, USA

João Flávio Nogueira, MD
Sinus and Oto Centro–Hospital Geral de Fortaleza
Rua Dr. José Furtado, 1480
60822-300 Fortaleza, Brazil

Matteo Alicandri-Ciufelli, MD, FEBORL-HNS
Otolaryngology Department
University Hospital of Modena
Via del Pozzo 71
41100 Modena, Italy

Neurosurgery Department
New Civil Hospital Sant'Agostino-Estense
Stradello Baggiovara 53
41126 Baggiovara (MO), Italy

Mohamed Badr-El-Dine, MD
Otolaryngology Department
University Hospital of Alexandria
36 Rouschdy Street #6
Rouschdy, Alexandria, Egypt

Michael S. Cohen, MD
Harvard Medical School
243 Charles Street
Boston, MA 02114, USA

Pediatric Hearing Loss Clinic
Division of Pediatric Otolaryngology
Massachusetts Eye and Ear Infirmary
Boston, MA, USA

Marc Dean, MD
Department of Otolaryngology–Head and Neck Surgery
Louisiana State University Health Sciences Center
Shreveport, LA, USA

Otorhinologic Research Institute
Fort Worth, TX, USA

Brandon Isaacson, MD, FACS
Department of Otolaryngology–Head and Neck Surgery
University of Texas–Southwestern Medical Center
5323 Harry Hines Boulevard
Dallas, TX 75390-9035, USA

Nicholas Jufas, MBBS, MS, FRACS
Kolling Deafness Research Centre
University of Sydney and
Macquarie University
Discipline of Surgery
Sydney Medical School
Sydney, Australia

Daniel J. Lee, MD, FACS
Department of Otolaryngology
Massachusetts Eye and Ear Infirmary
Boston, MA, USA

Department of Otolaryngology
Harvard Medical School
243 Charles Street
Boston, MA 02114, USA

Rudolf Leuwer, MD
ENT Department
HELIOS Hospital Krefeld
Lutherplatz 40
47805 Krefeld, Germany

Daniele Marchioni, MD
Otolaryngology Department
University Hospital of Verona
Verona, Italy

Nirmal Patel, MBBS, MS, FRACS
Kolling Deafness Research Centre
University of Sydney and
Macquarie University
Discipline of Surgery
Sydney Medical School
Sydney, Australia

Sydney Endoscopic Ear Surgery Research Group
Suite A12
24-32 Lexington Drive
Bella Vista, New South Wales 2153, Australia

Livio Presutti, MD
Otolaryngology Department
University Hospital of Modena
Via del Pozzo 71
41100 Modena, Italy

Alejandro Rivas, MD
Department of Otolaryngology–Head and Neck Surgery
Vanderbilt University Medical Center
1215 21st Avenue South, Suite 7209
Nashville, TN 37232, USA

E-mail addresses:

mtarabichi@ahdubai.com (M. Tarabichi)
Dennis.Poe@childrens.harvard.edu (D.S. Poe)
joaoflavioce@hotmail.com (J.F. Nogueira)
matteo.alicandri@hotmail.it (M. Alicandri-Ciufelli)
mbeldine@yahoo.com (M. Badr-El-Dine)
Michael_Cohen@meei.harvard.edu (M.S. Cohen)
marc.dean@gmail.com (M. Dean)

Brandon.isaacson@utsouthwestern.edu (B. Isaacson)
njufas@gmail.com (N. Jufas)
Daniel_Lee@meei.harvard.edu (D.J. Lee)
rudolf.leuwer@helios-kliniken.de (R. Leuwer)
marchionidaniele@yahoo.it (D. Marchioni)
nirmal.p.patel@gmail.com (N. Patel)
presutti.livio@policlinico.mo.it (L. Presutti)
alejandra.rivas@vanderbilt.edu (A. Rivas)