

AOTT

ACTA ORTHOPAEDICA et TRAUMATOLOGICA TURCICA

Acta Orthop Traumatol Turc ISSN 1017-995X • EISSN 2589-1294



$\begin{tabular}{ll} The Official Journal of \\ The Turkish Association of Orthopaedics and Traumatology (TOTDER) \\ and \\ \end{tabular}$

The Turkish Society of Orthopaedics and Traumatology (TOTBID)

Executive Board of Turkish Association of Orthopaedics and Traumatology

Önder Aydıngöz (President)
Yusuf Öztürkmen (Former President)
Mustafa Gökhan Bilgili
Ali Şeker
Yavuz Sağlam
Turgut Akgül
Sefa Giray Batıbay
Süleyman Semih Dedeoğlu
Adnan Kara
Mehmet Ali Talmaç

Executive Committee of the Turkish Society of Orthopaedics and Traumatology

Mehmet Demirhan (President)
Cem Nuri Aktekin (Former President)
Güzelali Özdemir
Mahmut Kalem
Osman Tecimel
Ahmet Murat Bülbül
Ali Erşen
İrfan Esenkaya
Önder Kalenderer
Tülin Türközü

Owner on behalf of the Turkish Association of Orthopaedics and Traumatology: Önder Aydıngöz • Publication Type: Bimonthly periodical • Publication date: September 18, 2024 • Published by the Turkish Association of Orthopaedics and Traumatology







The Official Journal of the Turkish Association of Orthopaedics and Traumatology (TOTDER) and the Turkish Society of Orthopaedics and Traumatology (TOTBID)



General Manager Ali Şahin

Journal Managers Deniz Kaya Irmak Berberoğlu

Publications Coordinators Derya Azer Nisanur Atıcı Şeref Mert Gücün Lütfiye Çetin Yiğit Pekzeren

Publications Technologies Coordinator **Ayça Nur Sezen**

Project Assistants Batuhan Kara Ozan Şahin

Contact Address: Büyükdere Cad. 199/6, 34394, Şişli, İstanbul, Türkiye Phone: +90 212 217 17 00 Fax: +90 212 217 22 92 E-mail: info@avesyayincilik.com

Editor-in-Chief

Haluk Berk

Dokuz Eylül University, School of Medicine, İzmir Türkiye editor@aott.org.tr

Former Editor-in-Chief

Önder Kılıçoğlu

İstanbul University, İstanbul School of Medicine, İstanbul, Türkiye kilicoglu@aott.org.tr

Technical Editors

Emre Acar

Dokuz Eylül University, School of Medicine, İzmir, Türkiye

Onur Başçı

Dokuz Eylül University, School of Medicine, İzmir, Türkiye

Mehmet Demirel

İstanbul University, İstanbul Faculty of Medicine, İstanbul, Türkiye

Murat Korkmaz

Koç University Hospital, İstanbul, Türkiye

Emre Anıl Özbek

Ankara University, School of Medicine, Ankara Türkiye

Cemil Cihad Gedik

Koç University, School of Medicine, İstanbul, Türkiye

Associate Editor and Social Media Editor

İlker Eren

Koç University, School of Medicine, İstanbul, Türkive

Alper Şükrü Kendirci

Istanbul University-Cerrahpaşa, School of Medicine, İstanbul, Türkiye

Associate Editors

Kaya Akan

Okan University, School of Medicine, İstanbul, Türkiye

Turgut Akgül

İstanbul University, İstanbul School of Medicine, İstanbul, Türkiye

Umut Akgün

Acıbadem Mehmet Ali Aydınlar University, School of Medicine, İstanbul, Türkiye

Andrea Angelini

Department of Orthopedics and Orthopedic Oncology, University of Padova, Padova, Italy

Ata Can Atalar

Acıbadem Mehmet Ali Aydınlar University, School of Medicine, İstanbul, Türkiye

Umur Avdoğan

Penn State Hershey Medical Center, Pennsylvania, USA

İbrahim Azboy

İstanbul Medipol University, Istanbul, Türkiye

Burak Beksaç

İstanbul, Türkiye

Jason Cheung Queen Mary Hospital, The University of

Queen Mary Hospital, The University of Hong Kong, Hong Kong

Derya Çelik

İstanbul University-Cerrahpaşa, Faculty of Health Sciences, İstanbul, Türkiye

Özgür Dede

Department of Orthopaedic Surgery, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA, USA

Nihat Demirkan Demirkaran

Department of Orthopedics and Traumatology, Kütahya Health Sciences University, School of Medicine, Evliya Çelebi Education and Research Hospital, Kütahya, Türkiye

Mehmet Ali Deveci

Koç University, School of Medicine, İstanbul, Türkiye

Bülent Erdemli

Ankara University, School of Medicine, Ankara, Türkiye

Fabio Galbusera

IRCCS Istituto Ortopedico Galeazzi, via Galeazzi 4, 20161 Milan, Italy

Emel Gönen

Koç University, School of Medicine, İstanbul, Türkiye

Gazi Huri

Hacettepe University, School of Medicine, Ankara, Türkiye

Avsegül Ketenci

Department of Physical Medicine and Rehabilitation, Koç University, İstanbul, Türkiye

Pembe Keskinoğlu

Dokuz Eylül University, School of Medicine, İzmir, Türkiye

Hakan Kınık

Ankara University, School of Medicine, Ankara, Türkiye

Esat Kıter

Odak Hospital, Denizli, Türkiye

Chiu Chee Kidd

Department of Orthopaedic Surgery, Faculty of Medicine, University of Malaya, Kuala Lumpur, W. Persekutuan Kuala Lumpur, Malaysia

Salih Marangoz

Acıbadem Mehmet Ali Aydınlar University, School of Medicine, İstanbul, Türkiye

Biarne Møller-Madsen

Aarhus University Hospital, Aarhus, Denmark

Haluk Özcanlı

Akdeniz University, School of Medicine, Antalya, Türkiye

Tuna Özyürekoğlu

Department of Surgery, Division of Hand Surgery, Christine M Kleinert Institute for Hand and Microsurgery, University of Louisville, USA

Gökhan Polat

İstanbul University, School of Medicine, İstanbul, Türkiye

Dündar Sabah

retired İzmir, Türkiye

Aksel Seyahi

Koç University, School of Medicine, İstanbul, Türkiye

Alpaslan Şenköylü

Gazi University, School of Medicine, Ankara, Türkiye

Ali Turgut

İzmir Tepecik Training and Research Hospital, İzmir, Türkiye

Rajeev Vohra

Department of Orthopaedics, Amandeep Hospital, Amritsar, India

Merter Yalçınkaya

Bahçeşehir University, School of Medicine, İstanbul, Türkiye

International Scientific Review Consultants

Gregory J. Della Roca University of Missouri, Orthopaedics, Columbia, Missouri

Enrique Gomez-Barrena

Department of Orthopedics and Traumatology, Hospital Universitario La Paz, Universidad Autómoma de Madrid, Madrid, Spain



Acta Orthopaedica et Traumatologica Turcica (AOTT) is a scientific, open access periodical published by independent, unbiased, and double-blinded peer-review principles. The journal is the official publication of the Turkish Association of Orthopaedics and Traumatology and the Turkish Society of Orthopaedics and Traumatology. It is published bimonthly in January, March, May, July, September, and November. The publication language of the journal is English.

The aim of the journal is to publish original studies of the highest scientific and clinical value in orthopedics, traumatology, and related disciplines. The scope of the journal includes but not limited to diagnostic, treatment, and prevention methods related to orthopedics and traumatology. Acta Orthopaedica et Traumatologica Turcica publishes clinical and basic research articles, case reports, personal clinical and technical notes, systematic reviews and meta-analyses and letters to the Editor. Proceedings of scientific meetings are also considered for publication.

The target audience of the journal includes healthcare professionals, physicians, and researchers who are interested or working in orthopedics and traumatology field, and related disciplines.

Acta Orthopaedica et Traumatologica Turcica is currently indexed in Web of Science-Science Citation Index Expanded, PubMed/Medline, PubMed Central, Scopus, DOAJ, CNKI and TUBITAK ULAKBIM TR Index,

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).

All manuscripts must be submitted via the online submission system, which is available at www.aott.org. tr. The journal guidelines, technical information, and the required forms are available on the journal's web page.

Expenses of the journal are covered by the article processing charges and the financial support received from the Turkish Association of Orthopaedics and Traumatology and the Turkish Society of Orthopaedics and Traumatology. Potential advertisers should contact the Editorial Office. 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 Turkish Association of Orthopaedics and Traumatology, editors, editorial board, and/or publisher; the editors, editorial board, and publisher disclaim any responsibility or liability for such materials.

All published content is available online, free of charge at www.aott.org.tr.

Turkish Association of Orthopaedics and Traumatology holds the international copyright of all the content published in the journal. The journal's content is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0).

Editor-in-Chief: Prof. Dr. Haluk Berk

Address: TOTDER Genel Merkezi, Şehremini, Koyuncu Sk. No: 4/5, 34104 Fatih, İstanbul, Türkiye

Phone: +90 212 530 15 08 **Fax:** +90 212 530 15 21 **E-mail:** editor@aott.org.tr

Publisher: AVES

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

Phone: +90 212 217 17 00 **Fax:** +90 212 217 22 92 **E-mail:** info@avesyayincilik.com

E-mail: info@avesyayıncılık.com **Web page:** www.avesyayincilik.com





CONTENTS

Invited Review

187 A comprehensive review of scapulothoracic abnormal motion (STAM):
evaluation, classification, and treatment strategies
Cemil Cihad Gedik. İlker Eren. Mehmet Demirhan. Bassem Elhassan

Research Articles

- 196 Metal ion levels after metal-on-metal hip resurfacing: A single-center longitudinal study of Chinese patients

 Yanlin Wan, Jia You, Wenxue Jiang, Pengfei Wang, Qun Xia
- 203 Clinical effect of posterior-only approach debridement, intervertebral fusion, and internal fixation for upper thoracic tuberculosis

 Tao Zhang, Songkai Li, Lihua Ma, Hua Liu, Chengwei Yang, Lian Zhang
- 209 Treatment outcomes of concomitant ipsilateral neck and trochanteric fractures using Gamma3 nails with U-blade lag screws
 Ki Hyuk Sung, So Hak Chung
- 215 Histological and scanning electron microscopy investigation of the effects of titanium surface modifications on osseointegration in rabbits

 Burak Aydın, Zekeriya Öztemür, Neşe Yeldir, Seyran Kılınç, Sefa Aktı, İsmail Bilgin
- 223 Similar short-term outcomes of ultrasound guided posterior intra-articular and anterior extra-articular corticosteroid injection in the treatment of primary frozen shoulder. A randomized controlled, single-blind study Ersin Sensoz, Omer Faruk Sevim, Hayrettin Cakmak, Suna Sahin Ediz, Engin Eceviz, Selim Ergun
- 229 Review of the treatment options and results of earthquake-related pelvic injuries after the Türkiye earthquake on 6th February

 Özhan Pazarcı, Mehmet Ali Talmaç, Bedirhan Sarı, Sami Sökücü
- 235 Surgical outcomes of cable plate fixation in treatment of Vancouver type B1 and type C periprosthetic femoral fractures: a retrospective case series

 Cengiz Şen, Taha Kızılkurt, Mehmet Demirel, Ahmet Müçteba Yıldırım, Yavuz Sağlam, İrfan Öztürk

Case Reports

- 244 Optimizing the distal anchorage in stabilization for the traumatic adjacent lumbar vertebra fracture in an adolescent idiopathic scoliosis patient who had posterior spinal fusion: a novel surgical technique Sze Khiong Fam, Chee Kidd Chiu, Chris Yin Wei Chan, Mun Keong Kwan
- 247 Bilateral fracture of anterior tibial tuberosity with complete patellar tendon rupture in an adolescent patient
 Carla Carbonell-Rosell, Oriol Pujol, Alberto Gargallo, Kushal Lakhani, Raquel Sevil, Daniel Pacha