

AOTT

ACTA ORTHOPAEDICA et TRAUMATOLOGICA TURCICA

Volume 46 • Number 1 • January-February 2012

Acta Orthop Traumatol Turc ISSN 1017 - 995x

ACTA ORTHOPAEDICA et TRAUMATOLOGICA TURCICA

Vol. 46 - No. 1 - January-February 2012

ISSN 1017-995X

The Official Journal of the Turkish Association of Orthopaedics and Traumatology and the Turkish Society of Orthopaedics and Traumatology

Ownership and Accountability for Contents

on behalf of the Turkish Association of Orthopaedics and Traumatology $Hayati\ Durmaz$

Editor

Mehmet Demirhan

Former Editor

Ünal Kuzgun

Vice Editors

Sait Ada Kaya Akan Ata Can Atalar Bülent Atilla

Önder Aydıngöz Haluk Berk Önder Kılıçoğlu Hakan Kınık Hakan Ömeroğlu Volkan Öztuna Halit Pınar Muharrem Yazıcı Yusuf Yıldız

Technical Editors

Nuri Aydın İlker Eren Vahit Emre Özden Aksel Seyahi Kamil Tabak

Executive Committee of the Turkish Association of Orthopaedics and Traumatology

Hayati Durmaz (President) İrfan Öztürk (Former President)

Ata Can Atalar Önder Aydıngöz Halil Bekler

İrfan Esenkaya Yavuz Kabukçuoğlu Mustafa Karahan Mehmet Akif Kaygusuz

Turgay Er Tuğrul Eren

Executive Committee of the Turkish Society of Orthopaedics and Traumatology

Önder Aydıngöz (President) Mahmut Nedim Doral (Former President)

Şahap Atik Semih Aydoğdu Mehmet Subaşı Mehmet Demirhan İzge Hakan Günal Gazi Zorer

International Scientific Review Consultants

Erhan Basad, Germany Besim Ben-Nissan, Australia Mats Brittberg, Sweden Pascal Christel, France Gregory Carl Fanelli, USA Alberto Gobbi, Italy Frank Gohlke, Germany Philippe Hardy, France Nicola Maffulli, UK Gideon Mann, Israel Maurilio Marcacci, Italy Bjarne Moller-Madsen, Denmark Norimasa Nakamura, Japan John Nyland, USA Savas Sourmelis, *Greece*C. Niek van Dijk, *The Netherlands*Rene Verdonk, *Belgium*Stuart L. Weinstein, *USA*Kaye E. Wilkins, *USA*Savio L-Y. Woo, *USA*

Executive Office:

Şehremini Mah., Millet Cad., Renk Apt., No: 77/6, 34104 Fındıkzade, Fatih, İstanbul, Turkey.

Phone: +90 212 - 530 15 08/21 Fax: +90 212 - 530 15 21 http://www.aott.org.tr e-mail: info@aott.org.tr

Editorial Contact Person:

Mehmet Demirhan, MD e-mail: editor@aott.org.tr

Publisher:

deo**med**®

Deomed Publishing
Acıbadem Cad. İsmail Hakkı Bey Sok.
Pehlivanoğlu İş Mrk. No: 7/1
34718 Kadıköy, İstanbul, Turkey
Phone: +90 216 - 414 83 43 pbx
Fax: +90 216 - 414 83 42
http://www.deomed.com
e-mail: aott@deomed.com

Press:

Birmat Matbaacılık Yüzyıl Mah. Matbaacılar Sitesi 1. Cadde No: 131 Bağcılar, İstanbul Phone: +90 212 - 629 05 59 Fax: +90 212 - 629 01 39 http://www.birmat.com e-mail: birmat@birmat.com.tr

Press date: March 2012 Circulation: 150 Type of publication: Periodical

Acta Orthopaedica et Traumatologica Turcica (AOTT) is a peer-reviewed journal published six times a year by the Turkish Association of Orthopaedics and Traumatology (TOTDER).

Materials published in the Journal is covered by copyright ©2012 TOTDER.

All rights reserved.

Included and indexed in the Science Citation Index-Expanded (SCIE), Index Medicus-Medline, Index Copernicus, and the Turkish Medical Index.

All articles published in the Journal are freely available both in English and Turkish at http://www.aott.org.tr.



This publication is printed on paper that meets the international standard ISO 9706: 1994. National Library of Medicine recommends the use of permanent, acid-free paper in the production of biomedical literature.

Funding:

Turkish Association of Orthopaedics and Traumatology, Turkish Society of Orthopaedics and Traumatology

Annual subscription rates:

Institutional: 170.- TL; Specialists: 120.- TL; In-training: 60.- TL; International: 150.- USD.

Instructions for the Authors	vii
From the Editor	ix
Original Articles	Effects of custom-made insole on gait pattern of patients with unilateral displaced intra-articular calcaneal fracture: evaluation with computerized gait analysis
	A. Öçgüder, H. Gök, C. Heycan, O. Tecimel, E. Tönük, M. Bozkurt
	Avoiding iatrogenic radial nerve injury during humeral fracture surgery:
	a modified approach to the distal humerus A. Ö. Yıldırım, Ö. F. Öken, V. S. Ünal, A. F. Esmer, M. Gülçek, A. Uçaner
	The effect of component position on clinical outcomes in resurfacing
	hip arthroplasty Ö. Korkmaz, F. S. Bozkuş, Ü. S. Aykut, H. Ç. Çakı, M. A. Kaygusuz
	Early results of HemiCAP® resurfacing implant H. Aslan, M. Çıtak, E. Gönen Baş, E. Duman, E. Aydın, Y. Ateş
	Results of volar locking plating for unstable distal radius fractures T. S. Sügün, Y. Gürbüz, K. Özaksar, T. Toros, M. Kayalar, E. Bal
	Evaluation of injection techniques in the treatment of lateral epicondylitis:
	a prospective randomized clinical trial G. Okçu, S. Erkan, M. Şentürk, R. T. Özalp, H. S. Yercan
	Correction of nascent malunion of distal radius fractures S. S. Bilgin, M. Armangil
	The results of Pemberton's pericapsular osteotomy in patients with developmental hip dysplasia A. Aydın, F. Kalalı, V. Yıldız, N. Ezirmik, P. Aydın, A. Dostbil
	Functional results of lower extremity lengthening by motorized intramedullary nails H. Dinçyürek, M. Kocaoğlu, İ. L. Eralp, F. E. Bilen, G. Dikmen, İ. Eren

disease K. Alpantaki, G. Akra, P. Katonis In time and frequency in total hip arthroplasty procedures Fras, İ. Sungur, M. Yılmaz, M. Korkmaz, E. Çetinus	
	57
raș, İ. Sungur, M. Yılmaz, M. Korkmaz, E. Çetinus	57
	51
1 , 1	
H. Candemir	61
ı, M. Ünlü, Ö. S. Yıldırım	68
	72
	l-thickness meniscal tear: an experimental study on sheep Demirel, G. Atalan, F. F. Kaymaz, Y. Kocabey, H. Candemir caphoid dislocation I, M. Ünlü, Ö. S. Yıldırım de formation following anterior cruciate ligament with BPTB autograft I, C. Şen, G. Polat

Acta Orthopaedica et Traumatologica Turcica publishes diagnostic, treatment, and prevention methods related to orthopedics and traumatology and original studies in related disciplines. Contributions may be in the form of clinical and basic research articles, case reports, personal clinical and technical notes, and letters to the Editor. The Journal also publishes brief reports on original studies or evaluations, book reviews, and proceedings of scientific meetings. Opinions presented in published articles by no means represent the official endorsement of the Turkish Association of Orthopaedics and Traumatology. Articles and illustrations become the property of the Journal after publication. The Editor-in-Chief may request from the authors additional data, information, or complementary material concerning the manuscripts, and the authors must comply with such requests.

Manuscripts should be prepared in accordance with the Uniform Requirements for Manuscripts Submitted to Biomedical Journals regularly updated by the International Committee of Medical Journal Editors, available at http://www.icmje.org.

Ethical issues

All manuscripts presenting data obtained from research involving human subjects must include a statement that the written informed consent of the participants was obtained and that the study was approved by an institutional review board or an equivalent body. This institutional approval should be submitted with the manuscript. Authors of case reports must submit the written informed consent of the subject(s) of the report or of the patient's legal representatives for the publication of the manuscript. All studies should be carried out in accordance with the World Medical Association Declaration of Helsinki, covering the latest revision date. Patient confidentiality must be protected according to the universally accepted guidelines and rules. Manuscripts reporting the results of experimental studies on animals must include a statement that the study protocol was approved by the animal ethics committee of the institution and that the study was conducted in accordance with the internationally accepted guidelines, including the Universal Declaration of Animal Rights, European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes, Principles of Laboratory Animal Science, and the Handbook for the Care and Utilization of Laboratory Animals. The authors are strongly requested to send the approval of the ethics committee together with the manuscript. In addition, manuscripts on human and animal studies should describe procedures indicating the steps taken to eliminate pain and suffering.

Submission and peer reviewing

The official language of the Journal is English. In addition, the Turkish version of the journal as a translated complete journal issue is also printed for Turkish readers. Simultaneous electronic versions of all printed articles are presented in both English and Turkish at the official web site (http://www.aott.org.tr).

Following an initial evaluation and elimination for sufficient priority, manuscripts are subject to blind peer review by at least two reviewers. The Editor, who judges and analyzes the entire review process, reaches a final decision to accept or reject a manuscript, or to recommend a revision. The Editor has the right to reject a revised manuscript.

Copyright - Authors' approval - Conflict of interest

The authors should disclose all issues concerning financial relationship, conflict of interest, and competing interest that may potentially influence the results of the research or scientific judgement. All financial contributions or sponsorship, financial relations, and areas of conflict of interest should be clearly explained in a separate letter to the editor at the time of submission, with full assurance that any related document will be submitted to the Journal when requested.

Manuscripts should be sent with the Copyright-Authors' Approval-Conflict of Interest Letter signed by the author(s). A copy of this letter can be found at http://www.aott.org.tr/copyright_form.pdf. Manuscripts will not be accepted for evaluation until the receipt of this document by the Journal.

Correspondence address:

Türk Ortopedi ve Travmatoloji Derneği Sekreteryası, Şehremini Mah., Millet Cad., Renk Apt., No: 77/6, 34104 Fındıkzade, Fatih, İstanbul, Turkey Tel: +90 212 530 15 08/21 Fax: +90 212 530 15 21 e-mail: info@aott.org.tr

Submitting a manuscript

Submission and tracking of a manuscript can only be made through the Journal's online system at http://www.aott.org.tr. First, the corresponding author should register to obtain a user name and password.

Five steps of the submission process are summarized below.

- 1. Beginning submission: First, the article type is selected that best describes the manuscript, e.g. original paper, case presentation, technical note, letter to the editor, experimental work. Then, the manuscript control list is checked to ensure nothing is missing concerning the manuscript. In this step, comments to the Editor can be entered in the designated field.
- 2. The record of the submission: In this step, the following information is entered in the fields provided: the names of the authors, addresses, article title and abstract, which will allow these data to appear in search engines including PubMed.
- 3. Loading the manuscript: The manuscript file should be loaded according to the instructions listed. IT IS OF UTMOST IMPORTANCE THAT, FOR DOUBLE-BLIND REVIEWING PROCESS, INFORMATION ABOUT THE AUTHORS' IDENTITIES AND INSTITUTION DO NOT APPEAR ANYWHERE IN THE MANUSCRIPT. Instructions for manuscript preparation can be found in the "Author Guidelines" section.
- 4. Supplementary files: In this step, other files related to the manuscript are uploaded, including figures and tables. Although the system is able to manage all types of files, "jpeg" is preferred for photos, "mpeg" for video formats. For files that should be prevented from reviewers access such as Ethics Committee Approval, and Copyright-Authors' Approval-Conflict of Interest Letter, the check box provided in step 2 should be clicked in.
- 5. Verification: This final step includes checking the uploaded files and completing the submission procedure.

Manuscript preparation

The author(s) must declare that they were involved in at least 3 of the 5 stages of the study stated in the "acknowledgement of authorship and transfer of copyright agreement" as "designing the study", "collecting the data", "analyzing the data", "writing the manuscript" and "confirming the accuracy of the data and

the analyses". Those who do not fulfill this prerequisite should not be stated as an author.

The number of authors should not exceed 6 for clinical, basic and experimental studies, 4 for case reports and technical notes, and 3 for letters to the editor and reviews. In multi-center or multi-discipline studies, each author's contribution regarding the 5 stages mentioned above should be stated clearly. For this kind of multi-center or multi-discipline studies with excessive number of authors, the editor has the right to request that the number of authors be reduced.

From the beginning of introduction to the end of discussion, clinical, basic and experimental studies should not exceed 2,500 words, case reports and surgical techniques 1,500 words, letters to the editor 350 words. Manuscripts exceeding these limits will be returned to the author(s) to be shortened.

The follow-up time of each patient should be at least 2 years for orthopedic patient series or case reports (1 year is adequate for cases with infection and tumor), and 1 year for traumatized patient series or case reports.

Manuscripts with a follow-up duration below these limits will not be evaluated. Manuscripts should be designed in the following order: title page, abstract, main text, references, and tables, with each typeset on a separate page.

Title page: This page should only include the title of the manuscript, which should be carefully chosen to better reflect the contents of the study. Author names should not appear in the title and subsequent pages.

Abstract: It should not exceed 250 words. Abstracts should be structured in four paragraphs using the following subtitles: Objectives, Methods, Results, and Conclusion. Abstracts of case reports should be unstructured.

Main text: The body consists of Introduction, Patients/Materials and methods, Results, and Discussion. Use "Patients and methods" for clinical studies, and "Materials and methods" for animal and laboratory studies.

The *Introduction* section clearly states the purpose of the manuscript and includes a brief summary of the most relevant literature.

The *Patients/Materials and methods* section describes the study population and the study design, with adequate information on the techniques, materials, and methods used. A clear description of the statistical methods should also be given.

The *Results* section should provide a detailed report on the findings of the study. Data should be concisely presented, preferably in tables or illustrations, which should not exceed the page layout of the Journal.

The *Discussion* section should mainly rely on the conclusions derived from the results of the study, with relevant citations from the most recent research.

Letter to the Editor: Letters to the editor should not exceed 350 words.

References

References should be numbered in the order in which they are mentioned in the text. Only published articles or articles in press can be used in references. Unpublished data or personal communications should not be used. The style should conform to the standards described in detail in "Citing Medicine-The NLM Style Guide for Authors, Editors, and Publishers" (http://www. nlm.nih.gov/citingmedicine), which is recommended in the most recent update of "Uniform Requirements for Manuscripts Submitted to Biomedical Journals". A brief presentation of these standards can also be found at http://www.nlm.nih.gov/bsd/uniform_requirements.html.

Journal titles should be abbreviated according to the *Index Medicus*. The Journal's title is abbreviated as "Acta Orthop Traumatol Turc".

The style and punctuation should follow the formats outlined below:

Standard journal article:

Geiger EV, Maier M, Kelm A, Wutzler S, Seebach C, Marzi I. Functional outcome and complications following PHI-LOS plate fixation in proximal humeral fractures. Acta Orthop Traumatol Turc 2010:44:1-6.

All authors if six or fewer should be listed; otherwise, the first six and "et al." should be written.

Personal author(s):

McRea R. Clinical orthopaedic examination. 5th ed. Philadelphia: Churchill Livingstone; 2004.

Editor(s), compiler(s) as author:

Günal İ, Barton NJ, Çallı İ, editors. Current management of scaphoid fractures. Twenty questions answered. London: The Royal Society of Medicine Press; 2002.

Chapter in a book:

Wilkins K. Fractures and dislocation of the elbow region. In: Rockwood CA, Wilkins KE, King RE, editors. Fractures in children. Vol. 3, 3rd ed. New York: Lippincott; 1991. p. 509-828.

Conference paper:

Kouzelis A, Matzaroglou C, Kravvas A, Mylonas S, Megas P, Gliatis J. Anterior cruciate ligament reconstruction: patellar tendon autogaft versus four strand hamstring tendon. In: Proceedings of the 9th Turkish Sports Traumatology, Arthroscopy and Knee Surgery Congress; 2008 Oct 14-18; İstanbul, Turkey. p. 223. Unpublished conference papers should not be used in the reference list.

Direct use of references is strongly recommended and the authors may be asked to provide the first and last pages of certain references. Publication of the manuscript will be suspended until this request is fulfilled by the author(s).

Figures and tables

All illustrations (photographs, graphics, and drawings) accompanying the manuscript should be referred to as "figure". All figures should be numbered consecutively and mentioned in the text. Figure legends should be added at the end of the text as a separate section. Each figure should be prepared as a separate digital file in "jpeg" format, with a minimum of 9x13 cm and at 600 dpi or better resolution.

All illustrations should be original. Illustrations published elsewhere should be submitted with the written permission of the original copyright holder.

For recognizable photographs of human subjects, written permission signed by the patient or his/her legal representative should be submitted; otherwise, patient names or eyes must be blocked out to prevent identification. Microscopic photographs should include information on staining and magnification.

Upon the author's request, color prints will be considered for publication; however, the authors are responsible for the extra cost of printing color illustrations. Each table should be prepared on a separate page, either at the end of the text file or as a separate supplementary file, with table heading on top of the table. Table heading should be added to the main text file on a separate page when a table is submitted as a supplementary file.

FROM THE EDITOR

Dear Acta Orthopaedica Traumatologica et Turcica readers,

We are delighted to bring you this first issue of 2012 on the 50th year anniversary of our journal.

In this issue you will discover a limited edition of our logo in honor of our 50th year in print.

We will present several activities this year. The first will be the "2nd Istanbul Meeting" of TOTDER (Turkish Association of Orthopaedics and Traumatology), which will take place on May 31 - June 2. The symposium will be held in celebration of our 50th year and will discuss the ethical aspects of publishing.

In this issue, we have notable studies on hand surgery, trauma, arthroplasty, and foot, ankle and knee surgeries. I believe Okçu et al.'s clinical study on lateral epicondylitis and Duygulu et al.'s experimental study on the effects of bone marrow aspirate on meniscal repair will draw great interest.

Korkmaz et al.'s current and analytical study on resurfacing arthroplasty and Kalliopi et al.'s prognostic evaluation of spinal scores are other studies that I think will grab your attention.

Finally, I would like to thank the whole TOTDER and TOTBİD (Turkish Society of Orthopaedics and Traumatology) family, starting with our former editors, for their unsparing efforts to preserve the continuity and quality of our journal over this 50-year marathon. I wish you all a year of health and success.

To meetings in many 50 years to come!

Best regards,

Mehmet Demirhan, MD

Editor-in-Chief, Acta Orthopaedica et Traumatologica Turcica