

www.sportsmedicinegreece.com

Tómos 3, Teúxos 2, Ianouápios 2009 Volume 3 - Issue 2, January 2009



### **HELLENIC SPORTS MEDICINE**

### **AOAHTIATPIKH**

**Journal of the Sports Medicine Association of Greece (S.M.A.G.)** 

Περιοδική Έκδοση της Αθλητιατρικής Εταιφείας Ελλάδος (Α.Ε.Ε.)

**Founder** 

K. Natsis Κ. Νάτσης

**Publisher** 

Εκδότης

Ιδουτής

I. Terzidis

Ι. Τεοζίδης

S.M.A.G. President

Πρόεδρος Α.Ε.Ε.

**Property** 

Ιδιοχτησία

Sports Medicine

Αθλητιατοική

Association of Greece

Εταιρεία Ελλάδος

P.O. Box 1616, 54124, Thessaloniki

Τ.Θ. 1616, 54124 Θεσσαλονίκη

**Printing House** 

Εκδοτικός Οίκος

**PMP** 

Ιατοικές Εκδόσεις

(Paschalidis Medical Publications, Ltd)

Π.Χ Πασχαλίδης

14th, Tetrapoleos str.,

Τετραπόλεως 14,

Athens, 115-27, Greece

115 27 Αθήνα

Tel.: 0030-210-7789.125,

Τηλ.: 0030-210.7789.125

Fax: 0030-210-7759.421

Fax: 0030-210.7759.421

**Publishing Committee** 

Εκδοτική Επιτροπή

N. Anastasopoulos

Ν. Αναστασόπουλος

E. Asouhidou

Ε. Ασουχίδου

N. Malliaropoulos

Ν. Μαλλιαρόπουλος

K. Natsis

Κ. Νάτσης

Em. Papakostas

Ε. Παπακώστας

I. Terzidis

Ι. Τεοζίδης

### EDITORIAL BOARD

### ΣΥΝΤΑΚΤΙΚΗ ΕΠΙΤΡΟΠΗ

Director

Διευθυντής

K. Natsis

Κ. Νάτσης

Members

Μέλη

N. Anastasopoulos

Ν. Αναστασόπουλος

E. Asouhidou

Ε. Ασουχίδου

I. Gigis

Ι. Γιγής

V. Karampatakis

Β. Καραμπατάκης

N. Lazaridis

Ν. Λαζαρίδης

An. Beletsiotis

Αν. Μπελετσιώτης

Em. Papakostas

Εμ. Παπακώστας

N. Raikos

Ν. Ράικος

I. Terzidis

Ι. Τεοζίδης

Journal Secretariat Γραμματεία Περιοδιχού

M. Vasileiou Μ. Βασιλείου

Consulting Editors - Reviewers Σύμβουλοι Έκδοσης - Κοιτές

M. Albani Μ. Αλμπάνη

K. Vasilikos K. Βασιλικός

A. Georgoulis A. Γεκρονούλη

A. Georgoulis Α. Γεωργούλης

P. Gigis Π. Γιγής

G. Gioulekas Γ. Γκιουλέκας

G. Godolias Γ. Γκοδόλιας

G. Kapetanos Γ. Καπετάνος

T. Lialiaris Θ. Λιαλιάρης

A. Manthos Α. Μάνθος

P. Baltopoulos Π. Μπαλτόπουλος

P. Nikolaou Π. Νιπολάου N. Dombros Ν. Ντόμπρος

S. Papastergiou Σ. Παπαστεργίου

D. Radopoulos Δ. Ραδόπουλος

P. Skandalakis Π. Σμανδαλάμης

P. Tsikaras Π. Τσικάρας I. Tsitouridis Ι. Τσιτουρίδης

M. Tsolaki M. Τσολάκη

E. Tsoukali-Papadopoulou Ε. Τσούκαλη-Παπαδοπούλου

A. Christodoulou A. Χριστοδούλου I. Christoforidis Ι. Χριστοφορίδης

### **International Editorial Board**

H. J. Appell A. Ionescu

N. Bachl J. Koebke

K. Christodoulakis U. Moebius

J. Duarte F. Pigozzi E. Ergen Ch. Rolf

G. Godolias A. Wicker

Ετήσια Συνδοομή Annual Subscription

Φυσικά Ποόσωπα: 30€ Individuals: 30€

Φοιτητές: 10€ Students: 10€

Ιδούματα, Οργανισμοί κ.λ.π.: 40€ Institutions, Organizations e.c.t.: 40€ Διανέμεται Δωρεάν στα Ταμειακώς Free Distribution to the Members of the Sports Medicine

Τακτοποιημένα Μέλη της Α.Ε.Ε. Association of Greece without outstanding debts to the fund

### Εγγραφές, Εμβάσματα (συνδρομών)-Διαφημίσεις

Αθλητιατοική Εταιρεία Ελλάδος Τ.Θ. 1616, 54124 Θεσσαλονίκη e-mail: natsis@med.auth.gr

Τοαπεζικός Λογαοιασμός: Τοάπεζα Eurobank,

Αριθμός: 0026.0139.32.0100519492

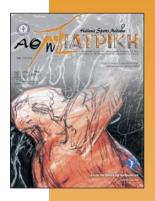
### **Subscriptions, Transfers-Advertisements**

Sports Medicine Association of Greece PO Box 1616, 54124 Thessaloniki

e-mail: natsis@med.auth.gr

Bank Account: Eurobank,

Number: 0026.0139.32.0100519492



**SPORTS MEDICINE** ΑΘΛΗΤΙΑΤΡΙΚΗ ASSOCIATION OF GREECE

**Management Committee** 

**President:** I. Terzidis

1st Vice President: N. Malliaropoulos

**2nd Vice President:** S. Galitsanos

Gen. Secretary: K. Natsis

Ass. Secretary: E. Papakostas

Treasurer: E. Asouchidou

Library Supervisor: A. Porfiriadou

Members: P. Gigis

G. Godolias

K. Manavis

P. Baltopoulos

E. Bela

P. Nicolaou S. Papastergiou

A. Papoutsidakis

ΕΤΑΙΡΕΙΑ ΕΛΛΑΔΟΣ

Διοικητικό Συμβούλιο

Ποόεδοος: Ι. Τεοζίδης

Α' Αντιπρόεδρος: Ν. Μαλλιαρόπουλος

Β' Αντιπρόεδρος: Σ. Γαλιτσάνος

Γεν. Γραμματέας: Κ. Νάτσης

Ειδ. Γραμματέας: Ε. Παπακώστας

Ταμίας: Ε. Ασουχίδου

Εφ. Βιβλιοθήκης: Α. Πορφυριάδου

Μέλη: Π. Γιγής

Γ. Γκοδόλιας

Κ. Μαναβής

Π. Μπαλτόπουλος

Ε. Μπέλα

Π. Νικολάου

Σ. Παπαστεργίου

Α. Παπουτσιδάκης



www.sportsmedicinegreece.com

Επιμέλεια εξωφύλλου Γιάννης Πέτρου «Movτζούρα»

# Instructions for Authors

The "Hellenic Sports Medicine" is the official journal of the Sports Medicine Association of Greece. The journal publishes original papers, reviews, short communications and letters to the Editors from Greece or abroad. Manuscripts submitted to the journal must contain novel data on theoretical, clinical or experimental research or on practical applications in the field of sports medicine. No substantial part of the submission should have been published elsewhere. If a part of the submission has been published or presented on a congress, symposium, or national meeting proceeding, the reference for that publication and/or presentation should be given in the manuscript acknowledgement section. Submitted papers undergo peer reviewing by three independent reviewers.

### CATEGORIES OF ARTICLES ACCEPTED FOR REVIEW

Review articles: Review articles on topics of broad interest are desirable. Authors who wish to submit an unsolicited review article should correspond with the Editors in Chief to determine the timeliness of the proposed review article. The correspondence should include an abstract and a complete outline of the proposed review article, including figures and tables (if possible). Review articles should not exceed 20 pages or 24,000 characters, including references and figures. Review articles are considered by the Editors and expert reviewers before a final decision regarding publication is made. Authors submitting review manuscripts should include a section describing the methods used for locating, selecting, extracting and synthesizing data. These methods should also be summarized in the abstract.

Original articles: Clinical, theoretical or experimental (basic or applied) research or practical applications in the field of Sports Medicine. Original articles should not exceed a total of 10 pages or 15,000 characters, including tables, figures and references. References should not exceed a total of 50. The form required include an abstract (no more than 250 words), a brief introduction where the purpose of the study should be referred, methods, statistical processing, results, discussion and references.

Case reports: Short manuscripts which present rare findings alone or in combination with a review of the literature in which standard or novel methods have been used. New theories on the pathology of various diseases or on the treatment in sports injuries can also be included. The manuscript must not exceed 3-4 typewritten pages or 2500 characters. The structure should be the same as in full papers. References should be restricted in 15.

**Information articles:** It is presented recent achievements in the field of Sports Medicine and they should not exceed six pages.

# **Proceedings, supplements and lectures of Sports** Medicine congress.

Letters to the Editor: They are welcome and will be published if appropriate. Letters (maximum length 800 words) relating to material previously published in "Hellenic Sports Medicine" should be submitted within 6 months after publication of the material the letter is referring to.

### STYLE OF THE MANUSCRIPTS

Manuscripts may be rejected without review on the basis of poor English or lack of conformity to stated standards of style. The text of observational and experimental articles is usually divided into sections with the headings: Introduction, Methods, Results and Discussion. Other types of articles, such as case reports, reviews and editorials, are likely to need other formats. Type or print on only one side of the paper. Use double-spacing throughout, including for the title page, abstract, text, acknowledgements, references, individual tables, and legends. There must be a space of 2.5 cm on each side of the paper.

**First page:** It should be referred the title. The title should be concise but informative. Names and addresses of the authors should not appear elsewhere in the main document, but in the bottom of the first page. The name of the clinic or the institution where the manuscript is coming from should also be referred in the first page. These data are entered separately.

**Abstract:** The abstract should be informative, self-explanatory without reference to the text of the manuscript. It should include essential significant results that support the conclusion of the work. It should also include the title and names of the authors. Key-words should be 3-5 and representative of the subject studied or discussed.

**Introduction:** It should be comprehensible to the general reader, give a clear statement of the purpose of the paper and provide relevant context to support the basis for the paper and the significance of the work. Do not exhaustively review the literature or refer results from the work having done.

Materials & Methods: Provide sufficient information in the text or by reference to other work to permit the submitted work to be repeated without the need to communicate with the authors. Relevant validity and reliability data should be provided for critical methods. State the type of statistical tests used. Include the number of observations and the statistical findings when appropriate. Parametric and nonparametric statistics must be used as appropriate. 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 and with the Helsinki Declaration of 1975, as revised in 1983. Do not use patients' names, initials or hospital numbers, especially in illustrative material such as figures. When reporting experiments on animals, indicate whether the institution's or a national research council's guide for, or any national law on, the care and use of laboratory animals was followed.

**Results:** Should be presented precisely and should not contain material that is appropriate in the discussion. Units, quantities, and formulas should be expressed according to the Systeme Internationale (SI units). All measurements should be given in metric units.

**Discussion:** Emphasize the new and important aspects of the study and conclusions derived from the study.

**Acknowledgements:** These should be as brief as possible. Any grant that requires acknowledgement should be mentioned. The names of funding organizations should be written in full.

References: Titles of journals should be abbreviated according to the latest edition of Index Medicus. All authors should be named (do not use "et al."). Authors bear complete responsibility for the accuracy of the references. The references must be written according to Vancouver System. Number references (arabic numbers) consecutively in the order in which they are first mentioned in the text. Type references in the text by Arabic numbers as superscripts (above the line of the text) and if at the end of a sentence after the period.

Only published or "in press" papers or books may

be cited in the reference list. Information from manuscripts submitted but not yet accepted should be cited in the text as "unpublished observations" in parentheses. Personal communications should be listed in the text in parentheses. Published abstracts could be used as references only if the full text has not been published yet. Use of a large number of abstracts or non peer reviewed articles in the reference section will be grounds for rejection of the submission without review.

- *a) Journal article:* Hubbard TJ, Hertel J. Mechanical contributions to chronic lateral ankle instability. *Sports Med.* 2006;36(3):26377.
- *b) Complete book:* Hutson M.A. Sports Injuries. Recognitions and management. Oxford University Press, Oxford, 1990.
- c) Chapter in a book: Phillips SJ, Whisnant JP. Hypertension and stroke. In: Leregh JH, Brenner BM, editors, Hypertension: pathophysiology, diagnosis, and management. 2nd ed. New York: Raven Press; 1995. p. 465-78.
- d) Conference/Congress proceedings: Tocitu D, editor Enzymatic of the adaptative processes in High-Performance Sport. Proceedings of the 12th Balkan Sports Medicine Congress, 6th International Congress of the Sports Medicine Association of Greece, 3rd Hellenic-Cyprus Sports Medicine Congress 2002 March 21-24; Thessaloniki, Greece.
- *e) Dissertation:* K.Natsis. Ultrastructural study of the skeletal muscle fibers after an experimental muscle atrophy [dissertation number 870]. Medical School, Aristotle University of Thessaloniki, 1993.
- *F) Journal article in electronic format:* Christodoulou A., Terzidis I., Natsis k, Gigis i, Pournaras j. Soleus accessorius, an anomalous muscle in a young athlete: case report and analysis of the literature. Br J Sports Med 2004;38(6):e-38

Available from: URL:

http://bjsm.bmj.com/cgi/content/full/38/6/e38

Figures: Figures, illustrations, or halftones should be used when findings are best visually communicated. The use of photographs or equipment and experimental subjects should be avoided; good line drawings are more informative. Abbreviations used in the figure must be explained in the legend. Reference to the figure should be made in the text. Figures, illustrations or halftones must be sharp and high contrast. Uniform typographical setup (font style & size, line thickness) of all figures in a paper is highly desirable. Images should be provided as .tif or .jpg files in a resolution of 300 dpi. Color figures, illustrations or

halftones will not be published unless the author requires color in the publication. In this case the author will be charged with the additional cost of printing.

**Tables:** Tables should be used to communicate information that is hard to present visually. Results whose interpretation is more easily comprehended by knowing the means and SEM (or SD) may be presented in a table(s). Tables should be self-explanatory and bear a short title. Tables should be provided either as word or excel files.

**Legends:** Table and figure legends should be typed on separate sheet. A footnote to the table should explain all abbreviations used in the table.

### SUBMITTING INFORMATION

- 1) Three full complimentary copies are supplied.
- 2) Every article should be followed by a cover letter citing the category of the article, that the article has not been published in the past in a Greek or international journal and that the authors demise the auctorial authorities to the Editorial Board. All the authors should sign the letter, which should not exceed the total of 800 words.
- 3) The article should be submitted necessarily in a "Word file" (CD or disk 3,5 A). Figures should be submitted

in tif or jpg files having a resolution at least 300 dpi.

#### GENERAL INFORMATION

After 6-8 weeks from receiving the article, the Editorial Board is going to inform the authors for accepting or not the manuscript.

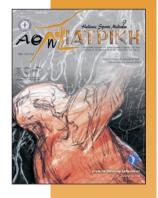
Numbers one to nine should be referred fully written and up to ten arithmetically. Percentages should be referred always digitally, while a number in the beginning of a sentence should be fully written. Abbreviations should be written initially in parenthesis next to the full phrase.

Studies published in "Hellenic Sports Medicine" constitute literary property of the journal. Republishing partial or total is allowed only after written permission of the Editorial Board.

Papers must be sent to:

# FOR THE JOURNAL HELLENIC SPORTS MEDICINE

Kostantinos Natsis, MD, PhD Orthopaedic Surgeon Pl. Ippodromiou . 17 P.C. 546 21 Thessaloniki GREECE



# **HELLENIC SPORTS MEDICINE**

Volume 3 - Issue 2, January 2009

# **Contents**

The World Anti-Doping Code -
The 2009 Prohibited List
2009 Prohibited List - Summary of Major Modifications and
Clarifications
Exercise - induced arterial adaptations
Baltopoulos P.
Posterior ankle impingement syndrome
Balalis K., Christoforakis Z., Katonis P., Tzoanos G.
Cognitive motion therapy in patients with mild cognitive
impairment
Kounti F., Bakoglidou E., Tsolaki M.
Complete rupture of the distal biceps brachii tendon - A case
report56
Natsis K., Anastasopoulos N., Papathanasiou E., Totlis T.
Epidemiologic data and determination of the musculoskeletal
injuries mechanism on the elite sailing athletes in dinghy
boat "470"
Ntitsiopoulos K., Skoufa A., Protopapadaki A., Terzidis I., Tsaklis P.
Double osteochondral fracture of the lateral condyle in
children after patellar dislocation. A case report and review
of the literature69
Alaseirlis D., Terzidis I., Kalampakos C., Michail K., Samoladas E.

# Christos Papanikolaou

Born in Larissa in 1968, he studied the art of frescoes under the instruction of S. Sergiadis, I. Arsenios and K. Xynopoulos (School of Fine Arts) from 1987 to 1992 and under I. Karousos from 1995 to 1996.

He personally contributed to the field of Byzantine painting with linear monochromatic chiaroscuro. He has lectured at European Union seminars on the Byzantine art (icons and frescoes); since 1994 has been teaching at the "Visual Arts Site" and POLYTECHNO Liberal Studies Workshop in Larissa and since 1999 at the School of Fine Arts in Tirana (O.A.A.).

He has exhibited his work in a number of solo exhibitions, including:

1993: Salone Centro Civico Aosta (Aosta valley).

1994: Salone Centro Civico Comune di Cesaro Boscone (Milan).

1994: Sala della Pieta San Marco (Milan).

1994: Municipal Art Gallery of Larissa.

1997: Wall - intervention, M.Raptou 's School, Larissa.

2000: Windows to the World (COSMOS) - (Cosmos Shop in Shop), Larissa.

2002: Memory temple\Installation in the therapeutic community "Exodus", Larissa 2003 Exhibition of studio work\Department of portable icon and fresco, National Gallery, Tirana, Albania.

2003: Frieze of angels/Corfu Corfu Imperial Grecotel.

2003: Installation in Larissa Municipal Art Gallery, G. I. Katsigras Museum.

2004: Installation in the space of the Hospital "RED CROSS" in Athens "Putting colour at grey".

2005: Installation in Attico Metro, station Ag. Dimitrios - Al. Panagoulis (Athens) "People - Birds - Angels".

2005: Installation in the University Hospital of Thessalia (Larissa).

2007: Installation in the University Hospital of Thessalia (Larissa).

2008: Installation in the Office of the Public Enterprise for Watering and Sanitation of Larissa (D.E.Y.A.L.)

2008: Installation in the "Hatzigianneio" Cultural Center Of Larissa.

2008: Installation in the Prefectorial House of Larissa.

He has also participated in a number of group exhibitions, including:

1997: Exhibition at the Contemporary Art Centre of Larissa (Experimental Team for Contemporary Religious Painting).

1999: Participated in the 1<sup>st</sup> MINI-GRAPHIC and PAINTING INTERNATIONAL BIENNIAL - PISA 1999 (Accademia d' Arte di Pisa).

1999: Participated in the visual arts exhibition held by the International Congress on The Olive in the Past and Present. P. and M. Kydonieos Foundation (Andros).

2001: Itinerary V, Larissa Contemporary Art Centre.

2002: Days of Greek Civilization, (Poland).

He is a member of the Visual Arts Chamber of Greece.



## Exercise-induced arterial adaptations

Baltopoulos P.

Abstract

Sports activity results in cardiovascular structural and functional adaptations, that depend on the pattern, intensity, duration and frequency of exercise. Although cardiac adaptations are well studied, arterial adaptations are a quite new field of interest and study. The current review aims to present the laboratory methods of the exercise induced arterial adaptations, the underlying pathophysiological mechanisms for cardiovascular remodeling and to summarize previous studies on cardiovascular adaptations to different sports for professional and amateur, healthy and disabled athletes.

Key words: exercise, adaptation, cardiovascular, endothelial.

### Posterior ankle impingement syndrome

Balalis K., Christoforakis Z., Katonis P., Tzoanos G.

**Abstract** 

**Aim:** The purpose of the present study is to present our experience and clinical results of the management of posterior ankle impingement syndrome (PAIS), and simultaneously refer to the relevant literature in a comprehensive manner.

Materials - Method: Sixteen cases of soccer players presenting with symptoms and signs of posterior impingement syndrome were treated in our Department over a period of 3 years (Dec 2003 - Dec 2006). Initially, the same protocol of conservative treatment (casting for rest, ice, anti-inflammatory medication and non-weigh bearing walking with crutches) was applied, for a period of 2-4 weeks. Then, treatment was continued with physiotherapy and gradually returning to sporting activities. Patients, failed to improve with conservative management for a minimum period of 3 months, and after further imaging evaluation (dynamic radiographic views - bone scan), were considered eligible for surgical intervention.

**Results:** Patients were followed-up by the same surgeon for a period ranging from 12 to 20 months (av.15) and the clinical results were graded according to Hedrick and McBride. Conservative treatment gave satisfactory results in 10 athletes (8 excellent, 2 good) and poor in 6. The latter, after further imaging, were operated on and the results were excellent in 3(50%), good in 2(33%) and fair in 1(17,5%).

**Conclusions:** The appropriate diagnostic approach of PAIS will direct treatment plans to the underlying pathology, so that the problem is dealt with successfully, either with the proper conservative treatment or with a surgical intervention.

Key words: posterior impingement, ankle, athletes.

## Cognitive motion therapy in patients with mild cognitive impairment

Kounti F., Bakoglidou E., Tsolaki M.

Abstract

The study investigated the possibilities of "Cognitive Motion Therapy" as a therapeutic method aiming to the improvement or stabilization of cognitive and functional performance of Mild Cognitive Impairment (MCI) patients, activating attention, memory, language and visuo-spatial abilities through motion instructions.

**Method:** Participants were 6 men and 6 women, with MCI (MMSE=24-30), classified in two groups, experimental and control. Groups were matched in gender (p=0.710), education (p=0.197), MMSE (p=0.354), emotional status (p=0.323), cholinesterase inhibitors (p=0.502), and cognitive abilities, assessed for the purposes of the study. Experimental group attended Cognitive Motion Therapy for five months, while controls did not participate in any non pharmacological therapy during this period. Neuropsychological assessment prior to and after the therapy included sound control of cognitive and functional performance for both groups.

**Results:** At the end of the therapy, there were differences between the two groups in favor of the experimental group, in ADL, verbal memory, attention, language and visuo-constructive abilities. In the control group, between the first and the second assessment a trend of deterioration was observed in attention, executive function and episodic memory, while the experimental group had a trend of improvement in visual perception.

**Conclusion:** The experimental patients had a significant benefit from the Cognitive Motion Therapy in respect to the controls that deteriorated in the same period of time.

Key words: non pharmacological therapy, cognitive training, motion therapy, mild cognitive impairment.

## Complete rupture of the distal biceps brachii tendon – A case report

Natsis K., Anastasopoulos N., Papathanasiou E., Totlis T.

Abstract

**Abstract:** Complete rupture of the distal biceps insertion is an infrequent injury. 96% of biceps tendon injuries involve the long head, 1% the short head, and 3% the distal insertion. The injury does appear to be most commonly caused by an unintentional eccentric load to a flexed elbow with a shortened and contracted muscle forcing the joint into extension. We report one case of a 45 years old male, with rupture of the distal biceps tendon which had been sustained in the process of resisting a heavy load with a flexed elbow.

Clinical examination and MRI of the elbow confirmed the diagnosis of distal biceps brachii tendon rupture. The patient underwent surgery where a complete distal tendon tear was repaired, using two Super Anchor 2.9 mm (Mitek). At last follow-up, there was no neurovascular deficit. We believe that operative repair of distal biceps tendon rupture, using a single anterior incision and suture anchors is a safe and effective method of treating this injury.

Key words: sports injuries, tendon ruptures, surgical management, biceps brachii muscle, distal insertion.

### Βιβλιοχραφία

- 1. Gilcreest FL. Albi P. Unusual lesions of muscles and tendons of the shoulder girdle and upper arm. Surg Gynecol Obstet 1939; 68:903-17.
- 2. Agins H. Chess J. Hoekstra DV. Teitge RA. Rupture of the distal insertion of the biceps brachii tendon. Clin Orthop 1988; 234:34-8.
- 3. Gilcreest EL, Albi P. Unusual lesions of muscles and tendons of the shoulder girdle and upper arm. Surg Gynecol Obstet 1939; 68:903-17.
- 4. Safran MR. Graham SM. Distal biceps tendon ruptures; incidence, demographics and the ef-

- fect of smoking. Clin Orthop 2002; 404:275-283.
- 5. Hempel, K; Schwencke, K. Uber Abrisse der distalen Bicepssehne. Arch Orthop Unfallchir. 1974; 79:313-319.
- 6. McReynolds, I.S.: Avulsion of the Insertion of the Biceps Brachii Tendon and Its Surgical Treatment (Abstract). J. Bone and Joint Surg., 45A:1780-1781, 1963.
- 7. Kristensen PW. Distal avulsion of the biceps brachii tendon. Injury 1991; 22:151-2.

- 8. Fitzgerald SW, Curry DR, Erickson SJ, Quinn SF. Friedman F. Distal biceps tendon injury: MR imaging diagnosis. Radiology 1994; 191:203-6.
- 9. Dobbie RP. Avulsion of the lower biceps brachii tendon: analysis of fiftyone previously unreported cases. Am J Surg 1941; 51:662-83.
- 10. Bernstein AD, Breslow MJ, Jazrawi LM. Distal biceps tendon ruptures: a historical perspective and current concepts. Am J Orthop 2001; 30:193-200.

# Epidemiologic data and determination of the musculoskeletal injuries mechanism on the elite sailing athletes in dinghy boat "470"

Ntitsiopoulos K., Skoufa A., Protopapadaki A., Terzidis I., Tsaklis P.

**Abstract** 

Sailing is a sport that needs a high level of technical skills and physical endurance. Many hours of training under extreme circumstances and the special kinesiology of the sport can be the causes of different musculoskeletal injuries. The aim of this study is to demonstrate the epidemiology and to determine the mechanisms of injuries in 470 elite sailing athletes. In this study fifteen male and five female elite athletes, with winning record participations in the Olympics, World and European championships (1st-8th place) were included. Their injuries, symptoms and therapeutic treatment during their careers were analyzed with regard to their medical history. The types of injuries that were diagnosed by orthopaedic surgeons were as follows: low back injuries (55%), knee injuries (15%), tendinosis (10%), muscles spasm (5%). In conclusion, the most common injuries of 470 athletes affect the lumbar spine and the knee. The underlying pathology includes overuse syndrome more often than direct trauma.

Key words: athletes, 470, injuries, sailing, dinghy boat.

### Βιβλιοχραφία

- 1. Cunningham P: F. & N. fitness and nutrition. Yachts and yachting 1996; 10-16.
- 2. Cunningham P: Olympic fit. Yachts and yachting 1999; 51-6.
- Walls J, Bertrand L, Gale T: Assessment of upwind dinghy sailing performance using a virtual reality dinghy sailing simulator. J Sci Med Sport 1998; 1:61-72.
- Allen JB: Sports medicine and sailing. Phys Med Rehabil Clin N Am 1999; 10:49-65.
- 5. Crafer S: Taking the strain. Yachts and yachting 1995; 4-7.
- 6. Young J: Prevent physical problems Ways

- to avoid overuse and overexposure. Sail 1984; 5:51-2, 54, 56.
- Kent j: Performance through conditioning: sports psychology and sports medicine. Yacht racing/cruising 1981; 20:83-6.
- Allen JB, De Jong MR: Sailing and sports medicine: a literature review. Br J Sports Med 2006; 40:587-593.
- 10. Newton F: Dinghy sailing. The practitioner 1989; Vol. 233, p. 1032-1035.
- 11. Schonle C: Pain and joint stress in sailing. Med. Sci. Res., 1993; 21, 875-880.
- 12. Seculic D, Medved V, Rausavljevi N, Medved

- V: EMG analysis of muscle load during simulation of characteristic postures in dinghy sailing. J Sports Med Phys Fitness 2006; 46:20-7.
- Blackburn M: Physical safety, In: Blackburn M,editor, Sailing Fitness and Training. Candera: Fitness books. 1997; p. 65-79.12.
- Blackburn M: Physiological responses to 90 minute of simulated dinghy sailing. J Sports Sci 1994: 12:383-90.
- Felici F, Rodio A, Madaffari A, Ercolani L, Marchetti M: The cardiovascular work of competitive dinghy sailing. J Sports Med Phys Fitness 1999; 39:309-14.

# Double osteochondral fracture of the lateral condyle in children after patellar dislocation. A case report and review of the literature

Alaseirlis D., Terzidis I., Kalampakos C., Michail K., Samoladas E.

Abstract

Osteochondral knee fractures in children after patellar dislocation are relatively rare injuries which could result in considerable knee problems if they are not treated on time. An interesting case report is presented, involving a 14 y.o. patient with two osteochondral fractures of the lateral femoral condyle following a recurrent patellar dislocation. History of the patient, clinical, X-ray and MRI findings, and differential diagnosis dilemma are presented. Final treatment consisted of anatomic reduction and fixation of the osteochondral fractures using absorbable pins, supplemented with release of the lateral retinacular ligament, reefing of the medial retinacular ligament and modified Roux- Goldthwait procedure, resulting in satisfactory outcome. Proper treatment of osteochondral fractures of the knee in children after patellar dislocation demands a meticulous diagnostic approach and often needs more than one demanding procedures. A brief review of the literature is presented concerning incidence, pathogenesis, pathoanatomy of the lesions, diagnostic approach and therapeutic options.

**Key words:** recurrent patellar dislocation, osteochondral knee fracture, medial patellofemoral ligament reefing, lateral patellofemoral ligament release, modified Roux-Goldthwait procedure.