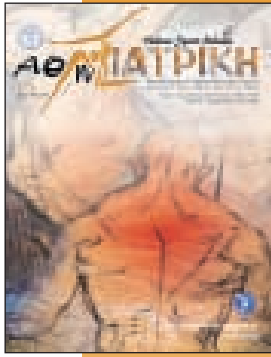


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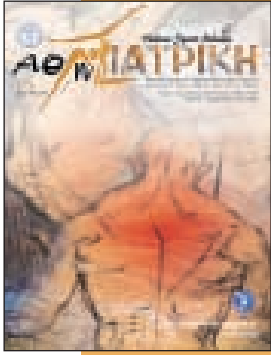
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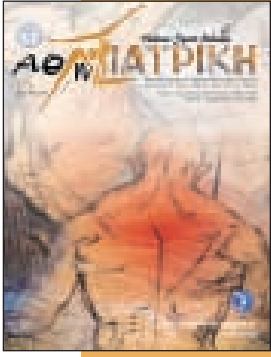
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Orthopaedic Surgeon
Pl. Ippodromiou . 17
P.C. 546 21 Thessaloniki
GREECE

email: natsis@med.auth.gr



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ABSTRACTS

The arg577ter polymorphism in exon 16 of ACTN3 gene in elite Greek field and track athletes

Papadimitriou I.

Abstract

The study of genetic influence in the making of an Olympic champion is still in its nascence, but this study provides some findings regarding the influence of genes on athletic performance. The objective of this study was to elucidate the genetic differences between elite Greek power and endurance track athletes by analyzing a mononucleotide polymorphism in exon 16 of the ACTN3 gene. The obtained results demonstrated that the genotype and allele frequencies of the top power athletes are statistically significant different from a representative random sample of the Greek population ($P=0.010$). It is worth mentioning that all the Olympic level sprinters participating in this study had at least one R allele in their genome. Thus, it is evident that the arg577ter polymorphism of ACTN3 gene is one of the various gene polymorphisms determining the levels of power-sprint ability of the athletes.

Key words: Athletes, arg577ter polymorphism, ACTN3 gene

The effect of motor control physiotherapy after a hang glider's surgically treated multiple trauma

Tasheva R.

Abstract

Hang gliding is one of the most dangerous sport activities because of the risk of highly-energetic traumas including acetabular fractures. Modern trends in treating complex acetabular fractures are directed at applying a surgical method securing anatomical reduction, stable internal fixation and a possibility of early physiotherapy. The precise implementation of motor tasks in physiotherapy after the adequate choice and applied of surgical approaches leads to a faster overcoming of the negative phenomena from movement disorders and to return to sport activity.

The purpose of the study is to present physical therapy program after surgically treated complex trauma caused by hang gliding.

Key Words: hang gliding, motor control, physiotherapy.

Morphological and immunohistochemical study of the rat myocardium after testosterone administration

Papamitsou T., Dermentzopoulou-Theodoridou M., Barlagiannis D., Kotouza A., Kotanidou E., Manthos A.

Abstract

The principal androgen in male and female is testosterone, which along with its metabolite dihydrotestosterone, exerts anabolic and androgenic effects through the androgen receptor. Non genomic effects are also well documented. Exogenous anabolic androgenic steroids and their influence on the performance and function of the heart, muscle, liver and other tissues have gained great interest. However, the usefulness of exogenous steroids in the myocardium has not been documented. The aim of this study is to demonstrate the ultrastructural alterations caused in the rat heart when testosterone was administered in rats, as well as to explore immunohistochemically any changes in the expression of the androgen receptor. Two groups of adult male Wistar rats were used. The first group received an everyday intramuscular dose of 12mg testosterone enanthate for 20 days, while the second group received placebo via the same route and for the same period of time. All rats were anaesthetized and sacrificed after the 20th day and tissue samples from the myocardium were received and processed for

transmission electron microscopy and immunohistochemistry using specific monoclonal antibodies against the androgen receptor. Significant ultrastructural alterations were observed in the myocytes. We report pathological appearance of the sarcomeres' structure including disorganization of the Z line. Mitochondrial oedema and enlargement of the mitochondria were abundantly present. Mitochondrial fusion was significant as was the existence of glycogen particles in between the sarcomeres. Immunohistochemistry showed the expression of the androgen receptor on the control group. When testosterone was administered, the staining for androgen receptor in the myocytes was more dense which was considered as an increase in the expression of the androgen receptor. Exogenous testosterone produces pathological alterations in the structure of myocytes in the rat heart. The androgen receptor increases its expression and may play a role in the observed ultrastructural changes. These findings are in agreement with studies that report the androgen receptor mediated cardiac hypertrophy caused by steroid abuse.

Key words: testosterone, morphological study, immunohistochemical study, myocardium, rat

Sport activity and development of osteoarthritis

Iosifidis M.

A b s t r a c t

Elite athletes' sports activities cause increased loads in their joints. Injuries of lower extremities increase the possibility of osteoarthritis. However, if the high impact and torsional loading and also the repeated low magnitude loading generated during intensive sport activity, cause cartilage degeneration is not clear yet. In our study we investigated the possible development of lower extremities osteoarthritis in former Greek elite athletes.

We studied 218 former elite athletes (soccer players, skiers, volleyball players, martial arts athletes, track and fields athletes, basketball players/ range of ages 40-84 years, mean 50.1 years SD=8.5). The control group was 181 males (range of ages 40-77 years, mean 50.7 years, SD=10) who didn't have systematic sport activity. The participants in the study had not diagnosed or/and operated for significant lower limb injury. Osteoarthritis was recorded through questionnaire, clinical examination and radiographic evaluation.

After adjusting the age, height, weight and body mass index (BMI), the statistical analysis (SPSS, independent samples t-test, z-test, CI=95%) showed no difference in the osteoarthritis incidence in former elite Greek athletes compared with the general population ($p>0,05$). However, the intensive sport activity was the major risk factor for the athletes, when the control group's body weight, occupation, and age were the main risk factors in the development of OA. Radiographic examination showed that the images of the former athletes presented increased osteoarthritic signs (osteophytes, joint line sclerosis, joint narrowing) in comparison with the control group, without, however, clinical signs of OA (pain, impaired ROM) ($p<0,01$).

Key words: Sport Activity - Articular Cartilage Degeneration – Osteoarthritis

Injuries during Greek traditional dances

Prantzidis I., Natsis K., Sofidis G., Kagioglou O., Prantzidis D.

A b s t r a c t

With the urbanization and the industrialization of Greek community, the Greek Traditional Dance (G.T.D.) is breaking away from its natural environment and is being transferred to the city as a spectacle. The consequence of this was a gradual extension in the teaching of traditional dance in schools and dancing societies. As a result there is a gradual increase of people who are involved with traditional dances, the establishment of dancing societies and the creation of a new occupation (a teacher of G.T.D.). The natural aftermath of this organized and methodical occupation with G.T.D. was the increase of the percentage of injuries in the people who are involved with it.

The purpose of this study was to register the kind and the frequency of dancer's lesions. Many confidential questionnaires were distributed and were filled namelessly by dancers from different regions of Greece. The specimen of the study was 485 individuals (202 men and 283 women), all members of a dancing society, with an average of age 27.68 years. The average of the occupation with dance was 9,01 years. From these people 77 persons were injured (15,87%), 43 were men (55,84%) and 34 women (44,15%). From the 77 individuals, 74 reported the part of the body which was injured, while 3 persons didn't. 71 dancers had an injury in one part of the body and 4 in two parts. From 78 injuries, 31 related to the ankle joint (39,74%), 23 to the knee joint (29,49%), 6 to the quadriceps muscle (7,69%), 4 to Achille tendon (5,13%), 3 to lumbar spine region (3,85%), 5 to foot (6,41%), 2 to tibia (2,56%), 2 to gastrocnemius muscle (2,56%), 1 to biceps femoris muscle (1,28%) and 1 to thumb. From 77 persons, 73 (94,8) visited a doctor for the diagnosis of the injury while 4 (5,20%) did not. From the lesions which were diagnosed 56 (71,79%) were characterized as acute injuries and 22 (28,21%) as chronic.

To 51 individuals (65,38%) a conservative treatment without medicine was recommended. A conservative treatment with medicine in 18 persons (2,08%) and in 9 dancers (11,54%) a surgery.

Key words: Greek traditional dances, injuries

Rupture of anterior cruciate ligament and menstrual cycle phase

Papastergiou P., Koukoulis N., Pappis G., Ziogas E., Dimitriadis Th., Parisis K.

Abstract

Purpose: Evaluation of a probable correlation between the anterior cruciate ligament rupture and a specific menstrual cycle phase in athletes.

Material and Method: Study of 42 female athletes of different sports who underwent an anterior cruciate ligament reconstruction, could define the day of menstrual cycle accurately when the knee injury sustained, weren't using oral contraceptives and had regular menstrual cycle of 28 days.

Results: From our study of 42 cases we found that 28 of women were injured during the follicular phase and 14 of women were injured during the luteal phase of their menstrual cycle.

Conclusion: There is correlation between the anterior cruciate ligament rupture and the menstrual cycle phase. Female athletes demonstrate higher than expected anterior cruciate ligament rupture rate during the follicular phase of menstrual cycle, and lower during the luteal phase of menstrual cycle (p=0.05).

Key words: Anterior Cruciate Ligament (ACL), Menstrual Cycle Phase.

Craniocerebral injuries during football games

Sirmos N., Kapoutzis N., Televantos A., Kapoutzis P., Chatzinasiou E., Sirmou E., Sirmos Ch.

Abstract

During Football games many accidents between the players may happen.

In the world of sports, soccer is unique becomes of the purpose for use of the unprotected head for controlling and advancing the ball.

Head injuries (craniocerebral, craniofacial) can be a result of contact of the head with another head (or other body parts), ground, goal post, other unknown objects or even the ball, almost never the less is a safe sport. We present our experience for emergency treatment in our surgical department in a peripheral hospital and Health Center during the period 2002 - 2005.

Key words: football, craniocerebral - craniofacial injuries - accident in football players.