Evolutia clinica a celor 42 de cazuri urmarite in dinamica, cu tratament de corectare a spasmofiliei a fost favorabila in 23 de cazuri, obtinuindu-se scaderea gradului suflului, precum si ameliorarea iconogramei.

De asemenea asanarea focarelor de infectie prin antibioticoterapie, amigdalectomie si tratament stomatologic, a dus la scaderea suflului sistolic in 9 cazuri si a titrului ASLO in toate cele 4 cazuri.

Concluzii:

- *coexistenta suflului sistolic cu spasmofilia este frecventa la copii, adolescenti si tineri; intr-o proportie mai mica s-au depistat si focare de infectie.*
- *de impune ca atitudine terapeutica depistarea dezechilibrelor cationice la copii si tineri, corectarea alimentatiei deficitare reechilibrarea principiilor alimentare necesare efortului sportiv a aportului adecvat de saruri minerale si vitamine necesare sustinerii efortului de performanta.*
- *depistarea precoce a focarelor de infectie si asanarea lor, trebuie sa constituie o prioritate la aceste grupe de virsta.*

Mentionam ca in aceste cazuri de sufluri sistolice inocente confluente sau nu cu spasmofilia, atitudinea medico-sportiva a fost de continuare a efortului sportiv, cu indicatii de controale periodice,

44.BIOSTATIC AND BIODYNAMIC IN THE VOLLEYBALL GAME

Authors: Lector E.T.Rinderu, Conf. S.M.Cataneanu

Universitatea din Craiova - Facultatea de Educatie Fizica si Sport

Str. Calea Bucuresti nr.165, 1100 - Craiova, Romania

The specific of the volleyball game involves also specific tasks. For this reason the volleyball game, compared to some other games, requires a special attention from biomechanical point of view. All types of strikes encountered in the volleyball game solicit the shoulder girdle. The present paper has as principal goal the presentation of a biomechanical model for the shoulder girdle emphasizing its applications into the volleyball practice. Kinematics analyses were performed using a classic image

*acquisition system. The obtained images (*TIF format) were analyzed via a PC using the facilities provided by commercial software packages. For identifying some peculiar anatomic markers, some of the subjects were analyzed using a computer tomograph (Simens Somatrom CRoXI-11) at the Clinic Hospital No.1 Craiova. These markers were compared to classic works in the field (Koritke, 1982). The proposed model was to find the distribution of the reaction forces and torques and the required equilibration forces and torques over the shoulder girdle in the case of volleyball specific physical tasks. The conclusion is that all the joints of the shoulder girdle are intensively solicited. For example, during an unloaded movement of flexion-extension of the upper limb the glenohumeral joint reaction forcesraises up to 1500 N. It is also put into evidence the importance of a correct learning of all technical elements. A limit of this study was that it didn't take in consideration the influences of the shocks encountered in such rapid movements and didn't introduce the retroarticular friction forces into the model. Another limitation was represented by the weak technical capabilities of the acquisition system, the attack strike being, for this reason, simulated, in our opinion, at a considerably lower speed.*

45.ASSESSMENTS OF THE BODY COMPOSITION IN THE SPORT OF FOOTBALL

Authors: Prof.Dr. Lluka Heqimi, Dr. Arben Kacurri, As.Prof.Dr. Koco Gjoka

In this study, 265 football players of the First League have been involved for the 1996-1997 Championship. For That a studying protocol was filledout in order to assess some kinonthropometric parameters in the Albanian football and the relations of some of them to the maximal aerobic ability. The average of this group is 22.67 ± 4.31, Weight 71.8 ± 6.21, Height 176.9 ± 5.43. Accordind to the formula "SIRI", the fat layer has been found 11.37 ± 2.07%, the fat weight accordind to the formula Failkner and Yuhasa 8.23 ± 2.07, the weight the bones according to the formula Rocha 11.81 ± 1.15 kg, the weight of the organs according to Wurch 17.3 ± 1.49 and

the muscles according to Matiega 34.62 ± 2.44 kg. These data have been involved in the ratios in % of weight itself which results:

49% of the general body weight is made of muscles, 24% of organs, 16% of bones and 11% fats.

According to the equation of prediction, it has been found that there exists a strong relationship between the aerobic power (which results in this study 3.73 ± 0.52 l/min, 52.12 ± 24 ml O_2 kg min^{-1} according to the indirect method of Åstrand) with some skin folds according to this equation:

VO_2 Obs = 0.29355 x biceps cutaneous folds + 0.182965 x pectoral cutaneous fold + 0.3154028 x subscapular cutaneous fold = 0.110043 x abdominal cutaneous fold

in which R^2 = 95.36%

VO_2 rel. = 4.847998 x biceps + 2.313959 x pect. + 4.596099 x subscap - 2.03174 x abd.

in which R^2 = 94.39%

46.RELATION BETWEEN MEDICAL CASE AND PERFORMANCE IMPROVEMENT IN WHEELCHAIR ATHLETES

Authors: Groumas N., Lekaki K., Tragoulias B., Tzouliadakis T., Sgantzos M.

In the last decade unlike the previous one there has been a significant difference in the Hellenic athletic field of wheelchair athletes as regards both performance and metal winning. This difference has been observed in International, European and Olympic contests. In this study, an effort is being made to correlate the complete medical case, administered to these individuals today, with the improvement in their performance. The continuos presence, mainly in the area of coaching and attendance by specialized doctors, together with the immediate treatment of injuries and complications occurring, coupled by their psychological support, have been the main factor in the continuos improvement of these individuals.

47.TENNIS ELBOW. RESULTS OF DIFFERENT TREATMENTS IN 124 CASES

Authors: Pazarlis A., Iatridis M., Lygizos G., Bitouni N., Groumas N.

During 1994-1996 we examined 124 cases (aged between 24-57) with tennis elbow as outpatients in our hospital. Of them 68 (Group A) were treated with medication and immobilization. A second group (Group B) with 33 patients were treated as above plus physiotherapy and a third group (Group C) with 23 patients were treated only with local cortisone injection. All cases were re-examined after the proper therapy. Of the Group A the rehabilitation time was 11 to 43 days with success in 47 of them. Of the Group B the rehabilitation time was 8 to 32 days with success in 22 of them. From the Group C 9 of them were free of symptoms from the 2^{nd} day while the rest needed a 2^{nd} injection with success in 4 of them. In this study an effort is being made to correlate the above methods with the success percentage, rehabilitation time, recurrence percentages in between 3 months and one year.

48.THE ROLE OF THE RECREATIONAL ATHLETIC ACTIVITIES IN THE PREVENTION OF COMPLICATIONS IN PATIENTS WITH SCI

Authors: Groumas N., Tzouliadakis T., Athanasopoulos K., Iatridis M., Lygizos G.

During 1995 we hospitalized 123 patients aged 18-47 (89 men and 34 women) with SCI. From them only 15 persons aged 21-34 (12 men and 3 women) were occupied with athletic activities, after their discharge form the rehabilitation clinic. All these patients were observed after their discharge and during 1996 every three months in our clinic as outpatients. We've made a protocol with similar ages - sex - injury level - Frankel scale and the patient's outcome level as all the complications presented during this time. It has been found that these 15 patients has fewer or no complications presented during this time. It has been found that these 15 patients has fewer or no complications in comparison with these not engaging in athletic activities.

49.THE COMPLEX SUPPLEMENTATION OF THE BASIC DIET IS AN APPROPIATE CHOICE DURING THE LONG-LASTING TRAINING PERIOD OF ELITE ROWERS

***Authors:** Nickolay Boyadjiev[1], Zdravko Taralov[2], Nenko Nenkov[3] and Ivan Damianov[1]*

[1]Department of Physiology and [2]Department of Clinical Laboratory, Faculty of Medicine, Plovdiv, Bulgaria, [3]Dispensary of Sports Medicine, Plovdiv, Bulgaria

It is difficult to maintain an adequate by nutrients and energy diet intake from the rowers for a long-lasting period of time (2-3 months) as the preparation period for important sports events is. The high energy demands of over 25 000 kJ/day cannot be satisfied only by use of high in carbohydrates (CHO) diets as it is strongly recommended. Undoubtedly these diets are essential but immediately before and during the competitions. A diet supplementation with complex balanced food additives, which consist of high-quality proteins, appropriate fats and CHO during a long period of time (8 weeks) is able to promote the establishment of the metabolic adaptation in the organism and specifically in skeletal muscles with adaptation usually occurs as a result of the training per se. Sixteen juniors rowers of national level (age 16.6 years) were subdivided into two groups: A (n=8) and B (n=8). Both groups received the same basic diet (22500 kJ/day) and were trained by identical scheme (twice a day, 5 days/week mainly aerobically) for 8 weeks. Group A received in addition 100 g each training day of a balanced supplement (30% protein rich in essential and branched-chain amino acids, 30% CHO with high glycemic index, 40% fats with medium- and short- chain triglycerides and polyunsaturated fatty acids). The supplement's composition was designed by a computer programme and by using the Double simplex method for linear optimization of food mixtures on the basis of the study of the specific nutritional demands of the rowers. Group B received the same quantity of placebo. The following anthropometric variables were measured/calculated BEFORE starting and AFTER finishing (8 weeks later) the trial:BMI, brachium and tibial circumferences, the ecto-, meso- and endomorphy of

the somatotype. The aerobic power was assessed both BEFORE and AFTER by measuring the VO_2max, HRmax, O_2pulse max and Wmax, and the sport performance - by personal best time (s) in 800 and 2640 m running- tests and by maximal power output in rowing (W). Blood was drawn twice to assess the protein, fat and CHO metabolism, and to measure the plasma activity of LDH, CK, AIAT and AsAT and the concentration of the plasma electrolytes (Ca, P, Mg, Na, K, Cl). It was found out that the BMI slightly decreased in group B. The brachium, tibial circumferences and mesomorphy significantly increased in group A ($P<0.01$) at the end of experiment. The VO_2max increased in group A at the end of the trial by 10% ($P<0.01$), but not changed in group B ($P>0.05$).

Better O_2 pulse max and sports performance were found out in group A at the end of experiment both, in comparison with group B ($P<0.05$), and with its own BEFORE values. A decrease of blood cholesterol levels was found in both groups AFTER in comparison with BEFORE values ($P<0.001$), but no changes of the others blood biochemical variables occurred. The activity of LDH decreased in both groups (11% and 15% respectively), but this of CK, AIAT and AsAT did not change. We concluded that the complex supplementation of the diet of the rowers with a balanced fat-CHO-protein (40-30-30%) formula during the long-lasting training period (8 weeks) promotes the building of the morphological basis for better aerobic power and sports performances and not alteres the plasma biochemical indices of the protein, fat and CHO metabolism.

50.A KINESIOTHERAPEUTIC PROGRAMME AND THE RESULTS OF ITS APPLICATION IN SPORTSMEN WITH A PARTIAL RUPTURE OF THE ANTERIOR CRUCIATE LIGAMENT

Authors: L.Spasov[1], Zv.Zamfirov[2]

[1]Dispensary of Sports Medicine, Plovdiv, Bulgaria

[2]Orthopedic Department, First City Hospital, Plovdiv, Bulgaria

23 sportsmen with a partial rupture of the anterior cruciate ligament (ACL) have been investigated. All patients have been treated 6 to 7 days by immobilization in the Orthopedic Department of the First City Hospital, and by a complex kinesiotherapy in the Dispensary of Sports Medicine in Plovdiv. It was investigated and analyzed as follows: the extent of the movements in the knee joint; the degree of the hypotrophy in the thigh muscles; the tone of m. quadriceps femoris at both rest and maximum isometric contraction; the strength of the flexors and extensors of the knee joint; the availability of a hydrops; the extent and the degree of the knee joint instability, as the values were included in IKDC and in the Lysholm scale.

The kinesiotherapeutic programme which was applied during the experiment included as follows: overlap and classic electrostimulation; suspensory and under-water therapy; cryotherapy by the method with a metal tube; postisometric relaxation technique; mechanotherapy; step training with bike ergometer. The data have been processed by the variation statistical analysis. The results obtained presented a considerable improvement of the extent of the movements in the knee joint, which occurred till the 5^{th} day, a moderate improvement of the muscle strength up 4 degree in accordance with MMT, and an improvement of the tone during the isometric contraction of m.quadriceps femoris till the 15^{th} day, and a smooth but stable influence of the hypotrophy in the femoral muscles. The term of observation was mean 2.5 years. The assessment was made by IKDC, the scale of Lysholm and the scale of Tegner. The results showed that the stabilization obtained in the knee joint is a good basis for the adaptation of the sportsmen with a partial rupture of the ACL to the higher by intensity physical workload related to their sports training programme.

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