

The Rehabilitation of Sports Muscle and Tendon Injuries

HYDROKINESITHERAPY IN SHOULDER MULTIDIRECTIONAL INSTABILITY OF THE THROWER

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Among the several humeral-scapula articulation pathologies our study has been particularly addressed to AMBRII, multidirectional instabilities whose initial treatment is meant to rehabilitate and, further on, if not successful, a surgical treatment with plastic capsular can be made.

The AMBRII always show an asymptomatic congenital global capsular laxity that causes a decompensation due to rousing factors so it becomes symptomatic and therefore painful and sub-luxating and barely tolerated by the subject.

A medical check is essential and may show a constitutional laxity besides positiveness in laxity tests (sulcus, front shift and posterior shift) and non clear positiveness in instability tests. Such a disorder, for athletes whose sport performances involve almost exclusively throws, is a hard problem to rehabilitation operators. The narrow demarcation line, especially in these cases, between AMBRII type instabilities and AIOS led us, later on, towards a kind of specific proprioceptive global rehabilitation rather than usual muscle strengthening. The choice to carry out most of the therapy in rehabilitation pools has been made because water (immersion) represents an important and further control and stimulation system for humeral-scapula articulation while exercising. The initial approach on the athlete is meant to reduce any pain by pharmacological treatments (FANS) or physiotherapy.

The later rehabilitation phase must always lead to a complete recovery of articulation through passive exercises in water and myotendinous stretching at home. Water activity must be carefully checked by the therapist to make sure that the patient absolutely exercises in a passive way to take advantage of the water floating property (Archimedes law).

During this therapy exercise quality is far more important than quantity in order to avoid overloading of the articulation, which is already extremely stimulated by sport activity.

As soon as the patient does not feel any pain during free movements of arm circling, we move to a specific water therapy.

Our choice is directed more to a whole proprioceptive work, rather than sectorial like muscle strengthening, as this kind of pathology, due to its multidirectional characteristics, leads to a great disorder of muscle and tendinous for athletes whose sport activity is merely a mechano-receptors that are in the humeral-scapula articulation. Therefore, it is a serious problem repetition of the throw.

Appropriate and more and more involving stimulations of such structures lead to a re-balance of the ligament type contentive structures and to a more adequate elasticity of muscle structures, thanks to the adaptation ability of our body.

The exercises always tend to involve agonist and antagonist muscles simultaneously with the use of weights light at the beginning and heavier and heavier afterwards.

At this time we can combine a light gym activity through elastic-ballistic exercises made with dumb-bells whose weight correspond to the 3% of the body weight at the beginning.

This training is made both with the right and left arm, in water as well as in the gymnasium, in order to confirm the correct performance of the movement as far as the central nervous system is concerned. It is extremely important, at this stage, to correct every compensative gesture which may alter the posture. After 60 days from the beginning of the rehabilitation in water we proceed to a specific training in the gymnasium to regain the natural execution of the movement.

Our experience and complete rehabilitation program is also available through video cassette.
