PHYSIOTHERAPEUTICAL TREATMENT FOR THE DISINSERTION OF THE EPICONDYLE MUSCLE

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INTRODUCTION

The hand is a polymorph, polyvalent and sensitive organ which since the beginning of mankind allowed the human being to elegantly transform into reality what its mind had conceived: a large number of things that range from the simplest and most ordinary to the incredibly complex and precise.

It is important to recognize that the hand does not function independently. It is the end and the reason of being of the upper member and it is therefore influenced by all the articulations that can be found above it.

The shoulder, the proximal articulation of the upper member, is the origin. It is an articulation dedicated to the tridimensional movement aimed at positionning the hand in a global position wherever it be. The elbow, in turn, is the intermediate articulation of the upper member. Its function is to bring the hand closer to or further away of the objective. The fore-arm then puts the hand in the right position to perform any kind of task.

The functioning of the hands depends on a whole of structures as are for instante the small bony columns that are a part of it and which together form multiple articulations, as well as the muscular system that assures its active moveability.

The muscular system that activates the hand can be divided into an intrinsic and extrinsic part, being the first the one that includes the muscles that originate in the hand and act incide of them. The second group is made out of the muscles that act within the hand but that do not originate within it.

The flexor muscles of the fingers belong to the first group, but for an optimal function it is of a vital importante to dispose of good dorsiflexor muscles. These are synergists of the fingers' flexors, which is why they facilitate the fingers' work.

In order to easily understand this essay, it has been structured in the following way:

chapter I contains the definition of the problem, the general and specific objectives and the justification; in chapter II you can find the functional anatomy of the forearm and the wrist, description and physiopathology of the epicondilous extensor muscles and surgical treatment.. Chapter III comprises the methodological framework which contains the proceedings, the limitations, the type of investigation, the inquiry, the population and the limits. Chapter IV contains the analysis of the results, the proposal, the conclusions, recommendations and bibliography.

Disinsertion at the origino f the epicondileous muscles

Figure 27. Disinsertion of the epicondileous musclesa (taken from Moore, 1999)

Physiopathology

The disinsertion of the epicondyle extensor muscles is generally caused by direct traumatisms in the area (injuries caused by pointed weapons or fire arms); indirect traumatisms (brusque movement stretching the epicondyle extensor muscles to the maximum); and finally degenerative processes (Gota ions, repeated infiltrations of hydrocortisones).

Physical discoveries

The diagnosis of this type of tendinous injury is generally obvious when there is a laceration intimately related with the clinical framework. It implies an inflammation in the external area of the humerus urnal articulation that can extend to the forearm, the wrist and the hand, pain in the epicondileous area and it may spread along the entire forearm, causing a functional impotence to perform the dorsal bending of the wrist and a deformation in the hand similar to the one produced by an injury of the radial nerve.

Figure 28.Pendular wrist (taken from Moore, 1999)

Surgical proceeding (Campbell, 1996)

Endorsed by Dr. Fernando Gonzáles.

Throughout history, there existed a large number of surgical proceedings to treat the disinsertion of the epicondileous extensor musle. The most accepted treatment modalities are:

HemiBunell

This technique is performed in order to attach the end of the tendon to the bone by means of wire in order to keep it in this position for a certain period of time. Nowadays there exist numerous materials to perform this procedure, but wire remains the strongest because it loses less strength to tension when making loose knots than other materials. Wire is more difficult to use than synthetic materials but they have a beter grip than synthetic fibres. With the help of the wire, a coupling in the shape of an 8 is made at the miotendinous union, which will then be passed through via an orifice previously made in the bone. It will be then be attached to the rear part of the epicondilite.

Figure 29. Surgical treatment with HemiBunell.