

Therapy With ESWT Associated With Physiokinesitherapy in The Treatment of The Stiff Hip in P.O.A. Post-Coma

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Introduction

The articular stiffness of the hip linked to the P.O.A. onset is quite a frequent pathology in subjects who have suffered from coma. It is a disabling condition, often appearing in progressive form.

The treatment with ESWT has been suggested in the past for this specific pathology by Morosini, De Pretto, Bosco, proving good results. The cases described hereafter have to be considered as special ones, since the major clinical focalisation refers to the psoas muscle with severe disorder not only of the flexion-extension of the hip but also of the intra-extrarotation and a stiffness of the up-and-over movement of the pelvis.

Therefore, the ESWT therapy has been suggested to these patients before a possible surgical treatment.

Materials and Methods

Three subjects have been treated (3 females, aged on average 28) suffering from hip stiffness after a coma episode; bilateral in 2 cases, one of these showing a complex P.O.A. both medially and laterally, monolateral in 1 case. The time elapsing from coma resolution goes from 5 to 8 months.

The subjects have been treated with SW (with a shock wave unit of the spark gap electro-hydraulic type: OSSATRON OSA 140, HMT) with 3000 SW at 16kV (equal to 0,164 mJ/mm²); treatment was repeated after two weeks.

After each treatment, the patients received a physiokinesitherapeutic treatment with passive (also forced) and active mobilization.

Results

The initial evaluation of the hip flexion-extension movement showed a mean ROM of 58,0° (\pm 20,5), whereas the intra-extrarotation showed a mean ROM of 27,0° (\pm 5,7).

Two weeks after ending the therapeutical cycle, the clinical evaluation showed a mean ROM of 80,0° (\pm 16,0) in the flexion-extension and 37,0° (\pm 8,4) in the internal-external-rotation.

After three months a further clinical evaluation has been made showing a mean ROM of 84,0° (\pm 19,2) with an average increase of 62,1% ($p < 0,0005$) in the flexion-extension and of 39,0° (\pm 9,6) in the internal-external-rotation with an average increase of 44,0% ($p < 0,005$).

The x-ray picture doesn't show any significant evolution and this especially proves to be neither constant nor related to a functional recovery.

Conclusions

The clinical cases described are a very limited sample but the result obtained allows to view the suggested therapeutic protocol with great interest.

The costs as well as the risks taken by the health care centre and by the patients proved to be substantially smaller than a possible surgical therapy.

The ESWT proves to be a non invasive treatment, not especially expensive and without side effects when administered by experts.