Evaluation of the therapeutic efficacy of shock wave treatment in patients affected by rhizoarthrosis

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Introduction:
The thumb is the main digit on which the complexity of human prehension depends. Instability of the carpometacarpal (CMC) joint is connected to an aberrant motion and is associated with loss of stability, deformity and pain. The evolution of this pathology involves the presence of marked adduction at CMC joint with eventual subluxation. Physical therapy showed no efficacy in this kind of disorder.

Methods:
We enrolled 20 patients affected by rhizoarthrosis of the 1st or 2nd degree according to Nalebuff classification, and we performed two sessions of shock wave therapy (ESWT) over a 3-week interval. Patients were evaluated with the Visual Analogical Scale, with pain response on Fisher's Algometer, with the pinch test and palmar test prior to treatment and then 1 month, 3 months, and 6 months after treatment.

Results:
Our results indicate a statistically significant reduction of pain and an improved range of motion. This improvement was maintained at the 3 month follow-up evaluation, but at 6 months we noted a decrease in the clinical condition.

Discussion:
Despite the fact that ESWT is not indicated for osteoarthritis diseases, it would seem to be an interesting approach for patients affected by rhizoarthrosis at the early stages; it was well tolerated and no adverse events were noted. Furthermore, this kind of treatment can delay and sometimes prevent surgical intervention, which in any case has often poor results which did not always resolve clinical and functional problems.

Conclusion:
According to our experience, patients treated with ESWT showed good clinical and functional results with a better capacity to perform their own activity for a medium-term period of time. Further double-blind studies are needed in order to provide more in-depth analysis of the effects of ESWT on this disease.