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High-energy extracorporeal shock-wave therapy for calcifying tendinitis of the rotator cuff

A RANDOMISED TRIAL

J.-D. Albert, MD, Rheumatologist[1]; J. Meadeb, MD, Rheumatologist[1]; P. Guggenbuhl, MD, Rheumatologist[1]; F. Marin, MD, Radiologist[2]; T. Benkalfate, MD, Orthopaedic Surgeon[3]; H. Thomazeau, MD, Professor of Orthopaedic Surgery[4]; and G. Chalès, MD, Professor of Rheumatology[1]

[1] Department of Rheumatology
[2] Department of Radiology
[3] Department of Orthopaedic Surgery, Clinique Mutualiste La Sagesse, 4 place Saint Guenolè, 35043 Rennes Cedex, France.
[4] Department of Orthopaedic Surgery, Hôpital-Sud, Rennes University Hospital, 16 Boulevard de Bulgarie, BP 90347, 35203 Rennes Cedex 2, France.

In a prospective randomised trial of calcifying tendinitis of the rotator cuff, we compared the efficacy of dual treatment sessions delivering 2500 extracorporeal shock waves at either high- or low-energy, via an electromagnetic generator under fluoroscopic guidance. Patients were eligible for the study if they had more than a three-month history of calcifying tendinitis of the rotator cuff, with calcification measuring 10 mm or more in maximum dimension. The primary outcome measure was the change in the Constant and Murley Score.

A total of 80 patients were enrolled (40 in each group), and were re-evaluated at a mean of 110 (41 to 255) days after treatment when the increase in Constant and Murley score was significantly greater (*t*-test, $p = 0.026$) in the high-energy treatment group than in the low-energy group. The improvement from the baseline level was significant in the high-energy group, with a mean gain of 12.5 (–20.7 to 47.5) points ($p < 0.0001$). The improvement was not significant in the low-energy group. Total or subtotal resorption of the calcification occurred in six patients (15%) in the high-energy group and in two patients (5%) in the low-energy group.

High-energy shock-wave therapy significantly improves symptoms in refractory calcifying tendinitis of the shoulder after three months of follow-up, but the calcific deposit remains unchanged in size in the majority of patients.