



CANADIAN ACADEMY OF SPORT MEDICINE
ACADÉMIE CANADIENNE DE MÉDECINE DU SPORT



**Annual Symposium July 4-7, 2001
in Calgary, Alberta**

**EFFECTIVENESS OF RADIAL SHOCKWAVE THERAPY (RSWT) ON TENNIS
ELBOW AND PLANTAR FASCIITIS.**

H. Lohrer*^{1,2}, J. Schoell^{1,2}, S. Arentz^{1,2}, T. Froelich², T. Straub², E. Penninger², R.
Diesch², G. Haupt²

¹Institute of Sports Medicine, Frankfurt/Main, Germany, ²RSWT Study Group

Objective: To evaluate the effectiveness of Radial Shockwave Therapy® (RSWT) on tennis elbow and plantar fasciitis.

Design: Multicentric, prospective, placebo-controlled, randomized, single-blind study approved by the Ethics committee of the Ruhr University Bochum, Germany.

Setting: Referral-based outpatient sports medicine clinic and private practices and one independent monitor at the Ruhr University Bochum.

Patients: 219 patients with either tennis elbow or fasciitis plantaris. Only patients after failed conservative therapy during 6 months preceding RSWT, with at least 2 different treatment approaches, and an indication for surgery were included.

Intervention: 103 patients (55 verum / 48 placebo) with plantar fasciitis and 116 patients (55 / 61) with tennis elbow were treated in one to three sessions with 2,000 impulses each using the Swiss DolorClast® (EMS, Dallas, TX, USA, www.ems-medicalamerica.com).

Main outcome measures: The pain center was localized using biofeedback. Pain at rest, pain at night, sports associated pain, pressure sensitivity were assessed using visual analogue scale (VAS) before and 1, 4, 12, 26 and 52 weeks after RSWT.

Main results: Entry parameters were homogeneous in either group. For both indications the verum group showed significantly better results than the placebo group; 73% of plantar fasciitis patients and 56% of tennis elbow patients, who were limited in their sporting activities prior to RSWT, had no more limitations 12 months post RSWT. These results are significantly superior to the results of the placebo group where only every fourth patient showed an improvement.

Conclusion: Radial Shockwave Therapy is an effective, non-invasive and economical treatment method for insertional tendopathies such as tennis elbow and plantar fasciitis. It is a successful alternative to open surgery as well as to conventional extracorporeal shockwave therapy. Further studies should be realized to investigate the effectiveness of Radial Shockwave Therapy for the treatment of other sports associated tendopathies.