

# ESWT CASE STUDY

## Treating a Partial Rupture of the Plantar Fascia for a Handball Player

René Toussaint MD, Medical office for orthopedics and sports medicine on Brühl

### Case study 1:

- 27-year-old female, first National Handball League, more than 10 years of experience in competitive sports
- Acute injury of the left foot (impact trauma of the heel with Distorsion of the foot) on 29th 2004 second injury incidence on 1<sup>st</sup> May 2005
- Diagnosis: Partial rupture of the plantar fascia, left (MRT diagnosis)
- Treatment: Injections (local anaesthetic with added cortison, rest, analgesics, physiotherapy with physical therapy / ultrasound)
- Initial contact by Dr. Toussaint in September 2005. Clinical assessment: treatment-resistant plantar fasciitis, left
- Persistent pain on weight-bearing, long races are not possible and handball-specific stress on the left foot possible
- 2 x 5 sessions of extracorporeal shock wave therapy/ ESWT (equipment: Swiss DolorClast® from EMS in Switzerland) in October and November 2005
  - Treatment parameters: 2000 pulses, 10Hz, 1.5-2bar,
  - Other accompanying treatments:
    - Kinesiotaping of the foot and calf, left
    - Physiotherapy for the lower limb
    - Accompanying self-treatment (including stretching of the thigh and lower leg musculature, excentric training, rolling on the sole of the foot with a tennis ball and golf ball according to instructions, alternating hot and cold foot baths)
    - Conditioning of the upper arm with an ergometer, crosstrainer, strong pain indicated with the bike ergometer
    - Insole discussed, but not provided (note: sensomotor insole), no relevant foot deformity
- Two weeks after the last series of ESWT treatments: symptom-oriented increased weight-bearing, rehabilitation training (with focus on the sensomotoric function and to reduce dysbalances), jogging possible, symptoms almost completely resolved prior to the Christmas break in December 2005, afterwards returning to handball-specific trainings was planned.
- Premature competition stress from 28th December 2005 and in January 2006. Strong exacerbation of symptoms once again, with limitations of the handball performance and clinical presentation of a plantar fasciitis.
- Renewed ESWT in a third series (Parameters see above),

sport-specific reduction of stress (for handball), personal measures in combination with rehabilitation training (see above)

- At the end of March 2006, completely able to compete after increased weight-bearing four weeks after the last ESWT session; follow-up examination in August 2006 showed no symptoms even with high stress during handball



### Case study 2:

- Male, 38 years old, professional equestrian
- Approximately 2.5 years prior to ESWT after a trauma, tear of the adductor tendon diagnosed, left (low level of symptoms, sensitive to cold, pulling pain, occasional stabbing pain, improvement with stretching)
- June 2003: minor accident during sports, pain exacerbation of the groin, left
- Treatment: Injections, compression stockings, rest, analgesics, medical gymnastics
- CT: (January 2004) calcified insertion tendinitis of the adductors, left
- 2 x 3 ESWT treatments in January and February 2004 (2000, 6 Hz, 2 bar)
- After ESWT: manual therapy, kinesiotaping, almost symptom-free
- Participation in the 2004 Olympics in Athens ensured

[info@sportmedizinambuehl.de](mailto:info@sportmedizinambuehl.de)



### René Toussaint

- Medical specialist for orthopaedics, sports medicine, manual medicine, physical therapy and social medicine
- Praxis für Orthopädie und Sportmedizin am Brühl
- Primary focus: Diagnostics, treatment, prevention and rehabilitation of locomotor illnesses and dysfunctions (spinal column, joints, musculature, tendons and ligaments), goal-oriented individual treatment of pain and sports medicine management for injuries, pathological stress and overload as well as performance diagnostics and support for competition.

### Network

- More than 20 years of continuous activity providing care for athletes (in individual and team sports, including handball, tennis and triathlon).
- Current activities include the position of the team doctor for the men's handball team SC DHfK (first German national league) and tournament doctor for the Leipzig Open.