

Shock wave therapy in sports medicine

Dr Andreas Heinzinger provides medical support to German skeleton and bobsleigh teams.

Bobsleigh, luge and skeleton athletes require extensive medical support. In this article, we look at a recent case involving a bobsleigh national team athlete with pain symptoms.

Good acceleration during the start phase is of crucial importance. All athletes in the team push



Fig. 1: 4-man bobsleigh team with pilot Thomas Florschütz at the start

the bobsleigh as fast as they can up to 15 metres, with a 2% gradient. Then the pilot jumps in, followed by the pushers (Fig. 1). Even if the run is perfect, a few hundredths of a second lost at start-up can easily add up to reduce the finishing time by a few tenths. This is why bobsleigh athletes not only require flawless technical skills, but also an excellent general athletic fitness. Many bobsleigh athletes are in fact recruited from track & field sports, capable of running 100 m in around 11 seconds.

During basic athletic fitness training, one of the pushers in the German national team developed strain-induced pain in the posterior left thigh muscles which seriously disrupted his training schedule. Extensive MRI examinations of the lumbar spine, sacroiliac joint and ischiocrural muscles failed to provide any clear diagnosis of the etiology of the pain symptoms. Ultrasound-guided injections at the lumbar facets and sacroiliac joint with concomitant physiotherapy did not result in any major improvement in the condition. It was only after the application of electro-



Fig. 2: DUOLITH® SD1 »ultra« – focused and radial shock wave therapy

magnetically generated focused shock waves (F-SW) combined with radial shock waves (R-SW) that the pain diminished significantly (Fig. 2). In fact, the patient reported substantial pain reduction right after the first therapy session.

During the treatment, shock waves were applied to the attachments of the

ischiocrural muscles, primarily at the ischial bone. In addition to alleviating pain, shock waves also have a strong anti-inflammatory effect. Moreover, radial shock waves provide effective mechanical muscle and fascia mobilization.

Author: Dr. Andreas Heinzinger
DocOrtho Berlin
www.drs-heinzinger.de
Associate doctor of the German Bobsleigh, Luge and Skeleton Association



Dr. Andreas Heinzinger, M.D., provided medical support to the German skeleton and bobsleigh teams (2-man & 4-man) at the World Cup event in Altenberg, Germany, from January 1st to 6th, 2013. The German athletes swept all medals in all three disciplines. Pilot Thomas Florschütz and his team won two medals. During the event, pusher Kevin Kuske received intensive muscle treatment with the mobile MASTERPULS® MP100 shock wave therapy system and he is full of praise for "his shock wave". Kuske has a history of frequent muscle hardening in his thigh muscles. Thanks to the combined focused/radial shock wave therapy with the DUOLITH® SD1 »ultra«, the symptoms can be minimized during the ordinary course of his training programme.

➔ Further information can be obtained from: STORZ MEDICAL