

Effects of Dry Needling with Direct Current on Iliotibial Band Syndrome

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Patient: A 31-year-old male, amateur long-distance runner for 8 years.

Complaint: Left knee pain for the past 6 months which was aggravated by climbing stairs or running.

Diagnosis: Iliotibial band syndrome, left side (Fig. 1A).

Assessments: Axial MRI revealed the presence of thickening of the iliotibial band and the lateral patellar shift (Fig. 1B, C).

Visual analog pain scale related to stair climbing was 7/10 before treatment.

Treatment: The patient was treated using an acupuncture needle inserted into the distal iliotibial band with a direct current of 12 volts and 200 micro-amperes applied for 30 seconds; the treatment was repeated weekly six times.

Re-assessments: After the treatment, MRI revealed that the lateral patellar shift and the thickness of the iliotibial band were reduced (Fig. 1B, C). The pain scale score decreased from 7/10 to 1/10.

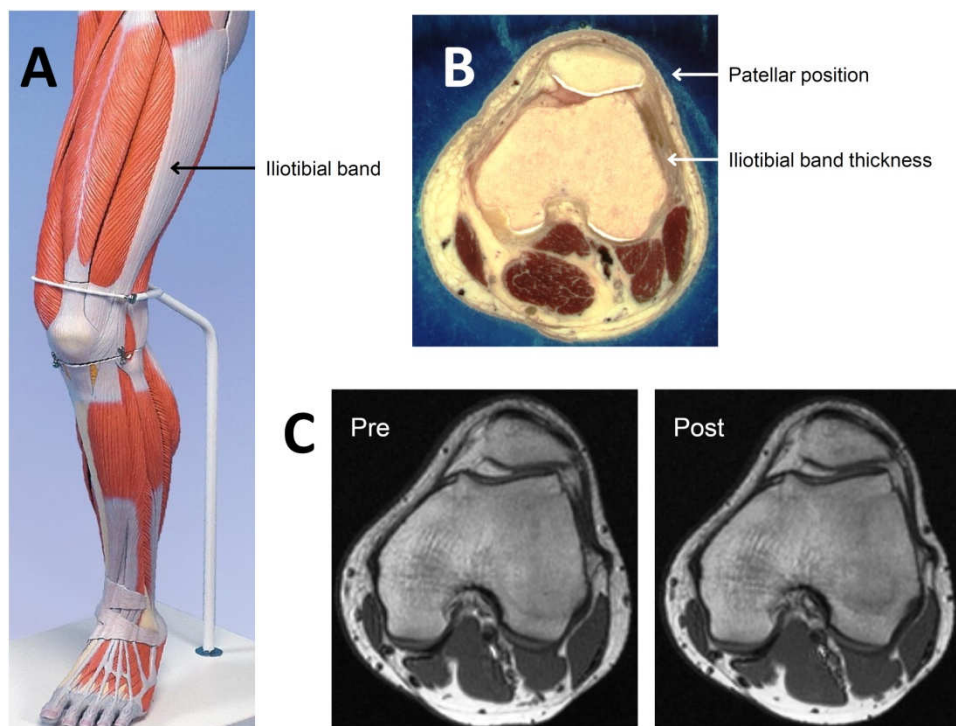


Fig 1. A = Anatomical model that shows iliotibial band.

B = Cadaveric patellofemoral joint that illustrates axial patellar position and iliotibial band thickness.

C = Pre- and post-treatment MRI: Lateral patellar shift and thickness of iliotibial band reduced.

Discussion: Invasive direct current could cause electrolysis on the distal iliotibial band, in turn, a local production of sodium hydroxide chemically weakened the fibrotic scar tissues. As the stiffness of the iliotibial band decreased, the optimal biomechanics of iliotibial band motion, patellar position and patellofemoral loading were restored and the pain was reduced.