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Extracorporeal Shock Wave Therapy as a Treatment of Painful Hematoma in Calf: A Case Report

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Introduction

Extracorporeal Shock Wave Therapy (ESWT) is applied to various musculoskeletal conditions including calcific tendinitis [1]. The muscle injuries can lead to hematomas, and unabsorbed hematomas sometimes cause pain. We report a case of painful hematoma successfully treated by ESWT.

Case **report**

A 65-year-old man visited outpatient department for left calf pain with swelling. Two weeks ago, he slipped in the mountain and injured his left leg. He took pain medication from the pharmacy, but the pain persisted and, the swelling on his legs became increasingly severe. His pain was getting worse, so he visited the hospital. At that time, his pain was about visual analog scale (VAS) 7. On physical examination, oval-shaped localized stiff mass with bruise was on his left upper posterior calf. During palpation, tenderness was localized to left proximal gastrocnemius. He could not even walk without crutch. Lower limb neurological and peripheral vascular examinations were within normal limits. Initial diagnostic ultrasound showed a hematoma in left gastrocnemius measuring 4.3 cm x 1.5 cm x 4.9 cm. There was no active bleeding and texture of hematoma was firm, stiff with low heterogenicity. Left tibia MRI confirmed rupture of gastrocnemius in medial head with hematoma between medial and lateral head of gastrocnemius. We applied ESWT to hematoma 3000 shocks delivered at a rate of 6 Hz with and energy of 0.056 mJ/mm2. After the procedure, his pain was decreased immediately to VAS 3, the mass was softened. Texture of hematoma was changed more heterogeneously in ultrasound. Due to the planned overseas travel, he returned 3 month after the initial visit and we could know the pain was dramatically relived during travel.

Conclusion

This is the first reported case, to our knowledge, of painful intramuscular hematoma treated with ESWT. Until now, ESWT was applied to plantar fasciitis, lateral epicondylitis, and other calcific tendinopathies [1]. We propose a painful hematoma as a new indication for ESWT.