

CASE REPORT

A NON-OPERATIVE APPROACH TO THE MANAGEMENT OF CHRONIC EXERTIONAL COMPARTMENT SYNDROME IN A TRIATHLETE: A CASE REPORT

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ABSTRACT

Background & Purpose: Chronic Exertional Compartment Syndrome (CECS) causes significant exercise related pain secondary to increased intra-compartmental pressure (ICP) in the lower extremities. CECS is most often treated with surgery with minimal information available on non-operative approaches to care. This case report presents a case of CECS successfully managed with physical therapy.

Study Design: Case report

Case Description: A 34-year-old competitive triathlete experienced bilateral anterior and posterior lower leg pain measured with a numerical pain rating scale of 7/10 at two miles of running. Pain decreased to resting levels of 4/10 two hours post exercise. The patient was diagnosed with bilateral CECS with left lower extremity ICP at rest measured at 36 mmHg (deep posterior), 36-38 mmHg (superficial posterior), and 25 mmHg (anterior). Surgery was recommended.

Interventions: The patient chose non-operative care and was treated with physical therapy using the Functional Manual Therapy approach aimed at addressing myofascial restrictions, neuromuscular function and motor control deficits throughout the lower quadrant for 23 visits over 3.5 months.

Outcomes: At discharge the patient had returned to running pain free and training for an Olympic distance triathlon. The Lower Extremity Functional Scale improved from 62 to 80. The patient reported minimal post exercise tightness in bilateral lower extremities. Left lower extremity compartment pressure measurements at rest were in normal ranges measuring at 11 mmHg (deep posterior), 8 mmHg (superficial posterior), 19 mmHg (anterior), and 10 mmHg (lateral). Three-years post intervention the patient remained pain free with a Global Rating of Change of 6.

Discussion: This case report describes the successful treatment of a triathlete with Functional Manual Therapy resulting in a return to competitive sports without pain.

Level of Evidence: Level 4

Key Words: Chronic Exertional Compartment Syndrome, fasciotomy, physical therapy, running

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