

Return to Sports After Chronic Anterior Exertional Compartment Syndrome of the Leg: Conservative Treatment Versus Surgery

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Summary:

This study supports surgery as the treatment of choice for anterior chronic anterior exertional compartment syndrome of the leg with differential benefit for fasciotomy in terms of pain and return to pre-diagnosis athletic activity.

Abstract:

Background: Chronic anterior exertional compartment syndrome (CECS) of the lower leg usually results from repetitive physical activity, especially in young people and amongst athletes and causes a reduction in athletic frequency and intensity. It is classically diagnosed on history and examination with recording of raised compartmental pressures following exercise. The aim of the study is to evaluate if surgical treatment for CECS of the lower leg will lead to full athletic activity recovery compare to conservative treatment.

Methods: Patients with anterior CECS of the leg were followed, assessing both groups for pain, functional status and the Tegner sports activity score with comparisons at diagnosis and following treatment.

Results: Forty three patients were treated for CECS (31; 72.1% with surgery and 12; 27.9% conservatively) with a mean follow-up of 28.15 (4.16-54.09) months. Reported pain improved at follow-up by 1.59 (0-6) points and by 4.27 ± (0-10) points in the conservatively and the surgically treated patient groups, respectively (P=0.014) with a mean change in the Tegner score of 0.09 (-5-5) and 3.22(-4-7), respectively (P=0.009). Three patients in the conservatively treated group (25% of 12) and 24 patients in the operated group (77.4% of 31) reported full resumption of their pre-diagnosis activity level (P=0.001).

Conclusion: This study supports surgery as the treatment of choice for anterior CECS of the leg with differential benefit for fasciotomy in terms of pain and return to pre-diagnosis athletic activity.