Journal of Visceral Surgery (2016) 153, 293—296

Available online at
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en

SURGICAL TECHNIQUE

Decompressive fasciotomy for acute compartment syndrome of the leg

C. Owen [a], A. Cavalcanti [a], V. Molina [b], C. Honoré [a,*]

[a] *Département de chirurgie générale, Gustave-Roussy Cancer Campus, 114, rue Edouard-Vaillant, 94805 Villejuif cedex, France*
[b] *Département de chirurgie orthopédique, CHU de Kremlin-Bicètre, 94270 Kremlin-Bicètre, France*

Available online 28 June 2016

Introduction

Compartment syndrome of the leg is the result of increased pressure in the muscular compartments enveloped by an inextensible fascial membrane that can lead to vascular, nerve and muscular ischemia; this is an absolute surgical emergency. The compartment syndrome of the leg can develop after trauma, surgical revascularization procedures, arterial or venous ischemia, after prolonged compression or following isolated extremity perfusion with an antimitotic agent [1].

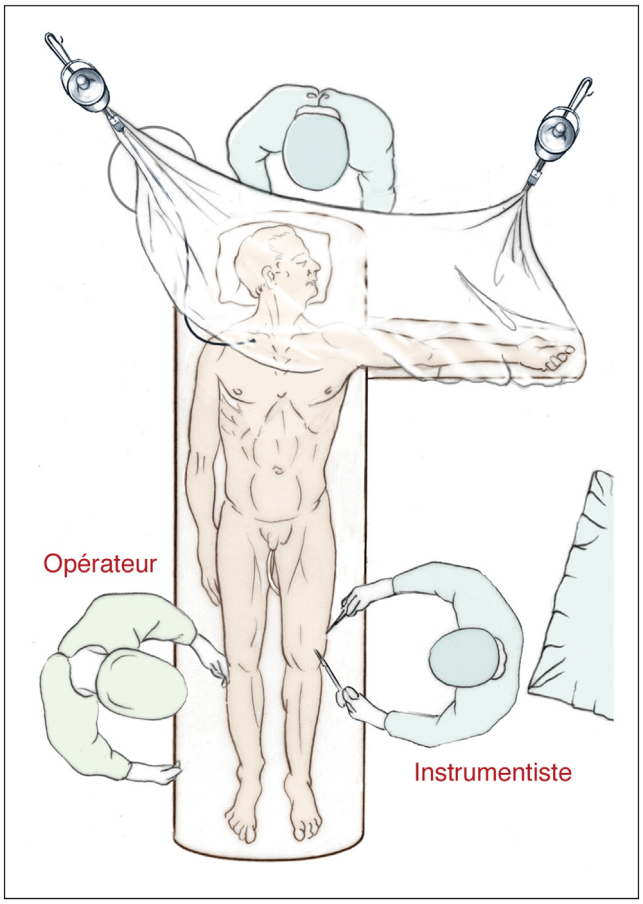
Diagnosis of the acute compartment syndrome of the leg is clinical, characterized by intractable pain despite antalgics arising in one of the above-mentioned situations; pain is classically triggered by passive mobilization of the toes. The skin of the leg is taut but peripheral pulses are present and palpable. A muscular compartment pressure over 15—20 mm Hg, but more particularly, a < 30 mm Hg difference between diastolic arterial pressure and the compartment pressure are characteristic, but time should not be lost in measuring: emergency decompression by fasciotomy, as described by Mubarak and Owen in 1975 [2], should be performed without delay.

* Corresponding author. Tel.: +33 1 42 11 56 68; fax: +33 1 42 11 53 39.
E-mail address: charles.honore@gustaveroussy.fr (C. Honoré).

http://dx.doi.org/10.1016/j.jviscsurg.2016.05.013

1 Patient position

The patient is positioned supine. Surgical instruments include retractors (Faraboeuf, Hartman or Beckman), a cold scalpel, an electrocoagulator and a suction device.



2 Incisions

Effective decompression of the leg requires that all four compartments be opened. Two vertical incisions are performed the entire length of the leg, one antero-lateral, to decompress the anterior and lateral compartments, the other, postero-medial, for the deep and superficial compartments.