SHORT COMMUNICATION

Anomalous tendinous contribution to the adductor canal by the adductor longus muscle

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INTRODUCTION

The adductor canal is a cone shaped tunnel between the anterior and medial compartments of the thigh through which the femoral artery, femoral vein, and saphenous nerve travel in the distal thigh (1-3). It is bordered anteromedially by the vastoadductor membrane and the Sartorius muscle, anterolaterally by the vastus medialis muscle, and posteriorly by the adductor longus and adductor magnus muscles (3). A fascial band called the vastoadductor membrane arises from the medial intramuscular septum to form the roof of the adductor canal (4). While the femoral artery and femoral vein continue posteriorly and exit the adductor hiatus, the saphenous nerve travels all the way through the adductor canal and exits the inferior opening of the adductor canal.

METHODS

During routine cadaveric dissection at the Kansas City University of Medicine and Biosciences, an anomalous tendinous insertion of the adductor longus muscle was observed on a 74 year old male cadaver. The anomaly was photographed and documented.

RESULTS

This tendinous contribution was distinctly different from the normal, fascial anatomy of the adductor canal. The tendon arose from the distal portion of adductor longus and created part of the roof of the canal.

DISCUSSION

Saphenous neuritis, neuralgia and adductor canal compression syndrome are commonly missed diagnoses of medial knee pain, paresthesias along the course of the saphenous nerve, and leg claudication (1,5,8-12).

ABSTRACT

Introduction: Classically the adductor canal is made from the fascial contributions from sartorius, adductor longus, adductor magnus and vastus medialis muscles. The contents of the adductor canal include femoral artery, femoral vein, and saphenous nerve. While the femoral artery and vein continue posteriorly through the adductor hiatus, the saphenous nerve splits into the infrapatellar branch and the sartorial branch (5-7). The sartorial branch pierces the fascia of the distal adductor canal and continues its path along the medial aspect of the leg (5,8-10). It is at this distal point that we found an abnormal fibrotendinous insertion of the adductor longus muscle forming part of the roof of the adductor canal.

Methods: During routine dissection, one specimen was found to have an abnormal tendinous contribution to the adductor canal.

Results: This tendon arose from the distal portions of adductor longus and created part of the roof of the canal.

Conclusions: The clinical consequences of such an anomaly may include conditions such as saphenous neuritis, adductor canal compression syndrome, as well as paresthesias along the saphenous nerve distribution.

Key Words: Adductor Canal; Anomalous tendon; Compression syndrome; Saphenous neuralgia

Figure 1: Artistic rendering of the adductor canal showing the anomalous tendon extending from the adductor longus muscle to the vastus medialis muscle coursing over the adductor canal.
claudication syndromes, which occur overwhelmingly in the elderly adductor canal through the adductor hiatus (12,15). Unlike atherosclerotic occlusion, often caused by compression of the popliteal artery and vein as they exit the adductor canal, adductor canal compression syndrome causing leg claudication is most often reserved for extreme or persistent cases (11).

Nature is usually managed by conservative treatments initially with surgical intervention for establishing one or both of the discussed syndromes. It is possible that this abnormality might be an explanation for young, non-athletes complaining of medial knee pain and leg claudication as well as athletes who suffer from chronic symptoms unresponsive to conservative treatments.

REFERENCES