Case Report



Ischioaponeuroticus / tensor fascia suralis

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ABSTRACT

Variant muscles in the hamstring include some degree of fusion among them, insertion of a muscular slip into fascia of leg or into fascia of thigh and accessory heads of origin of one of the muscles. During the dissection of the cadavers, an unusual muscle was found on the left side of 50-year-old male cadaver, attached to the belly of semitendinosus and terminated as a tendon which was inserted into intramuscular tendon of medial and lateral head of gastrocnemius muscle described as ischioaponeuroticus / tensor fascia suralis. © IJAV. 2011; 4: 104-105.

Key words [hamstrings] [tensor fascia suralis] [unusual muscle] [ischioaponeuroticus]

Introduction

Variant muscles while of fundamental concern to the anatomists have primarily of academic interest to the surgeon.

Muscular variations are quite common and frequently seen in the course of routine dissection of human body. The variations in the muscles may be conveniently grouped as progressive, retrogressive and atavistic [1].

The manner in which a disappeared muscle can put in an abrupt appearance as a complete entity suggests that muscles have a morphological individuality akin to that of skeletal elements. This phenomenon is of great significance to the comparative anatomist in his search for evidence bearing on the phylogenetic history of any particular species [1].

Case Report

We described the presence of a variant muscle in the left popliteal fossa during the routine educational dissection of a 50-year-old male cadaver of Asian origin in our department. The unusual muscle was proximally attached to the belly of semitendinosus and distally formed a thin tendon merging with the intratendinous fibers of medial and lateral head of gastrocnemius muscle. The popliteal vein accompanied the variant muscle (Figure 1).

Discussion

Variant hamstring muscles either semimembranosus or semitendinosus was described by Gray, Le double and Luschka. In these instances, the muscle originated from linea aspera of femur and passed medially to insert into the dorsal aspect of capsule of knee joint [2].

Patients with variant muscle in popliteal fossa usually present with swelling in the knee which may simulate soft tissue tumors probably hemangioma, synovial sarcoma [2].

Variant muscles in the hamstrings include some degree of fusion among them, insertion of muscular slip into fascia of leg [3].

A rare variation where in, an unusual muscle that leaves the belly of semitendinosus and ends in the tendon that joins the fascia of leg is described as ischioaponeuroticus / tensor fascia suralis [4].

A variant muscle may be mistaken for a mass or its tendon may be mistaken for an aberrant vessel, when prominent. Furthermore, because the tissue characteristics are that of either normal muscle or tendon, it may be missed altogether on routine imaging studies [5].

Since the popliteal vein is superficial to the artery in this area, it is possible that the variant muscle could have a compressive effect on popliteal vein [6].

Ischioaponeurotica / tensor fascia suralis



Figure 1. Dissected specimen of left popliteal fossa, showing variant muscle from semitendinosus inserted into intra tendinous fibers of medial and lateral head of gastrocnemius muscle. (1: semitendinosus muscle; 1a: tendon of semitendinosus; 2: ischioaponeuroticus muscle; 3: insertion of ischioaponeuroticus muscle; 4: small saphenous vein; 5: lateral head of gastrocnemius muscle; 6: sciatic nerve)

Variant muscle received its nerve supply from common peroneal nerve, based on the result of nerve fiber analysis [7].

Ischioaponeuroticus / tensor fascia suralis is an additional slip that leaves the belly of semitendinosus and ends in the

tendon that joins the fascia of leg. The awareness of this variant may prevent its misinterpretation as a pathologic entity by radiologists.

References

- [1] Le Gros Clark WE. The Tissues of the Body. 6th Ed., Oxford, the Clarendon Press. 1970; 139-141.
- [2] Dunn AW. Anomalous muscles simulating soft-tissue tumors in the lower extremities. Report of three cases. J Bone Joint Surg Am. 1965; 47: 1397—1400.
- [3] Hollinshead WH. Anatomy for Surgeons. 3rd Ed., Vol.3, Philadelphia, Lippincott-Williams & Wilkins. 1982;
- [4] Bergman RA, Thomson SA, Affif AK, Saadeh FA. Compendium of Human Anatomic Variation. Baltimore, Urban & Schwarzenberg. 1988; 23-24.
- [5] Chason DP, Schultz SM, Fleckenstein JL. Tensor fasciae suralis: depiction on MR images. AJR Am J Roentgenol. 1995; 185: 1220—1221.
- [6] Somayaji SN, Vincent R, Bairy KL. An anomalous muscle in the region of the popliteal fossa: case report. J Anat. 1998; 192: 307—308.
- [7] Okamoto K, Wakebe T, Saiki K, Nagashima S. An anomalous muscle in the superficial region of the popliteal fossa, with special reference to its innervation and derivation. Ann Anat. 2004; 188: 555—559.