



Case Report

Unusual accessory piriformis muscle: A case report

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ARTICLE INFO

Article history:

Received 3 May 2016

Accepted 28 March 2017

Available online 5 April 2017

Keywords:

Piriformis muscle

Sciatic nerve

Piriformis syndrome

Gluteal region

ABSTRACT

In human anatomy, piriformis muscle and peripheral nerve variants may represent an unrecognized etiology. These variations in the gluteal region may cause entrapment of the sciatic nerve and induce to the piriformis syndrome. We present a case of accessory piriformis muscle accompanying to high divisions of sciatic nerve, unusual course of nerves and fusion of the piriformis muscle with gluteus medius in the left gluteal region of a 64-year-old male cadaver. The nerves which are originating from dorsal part of the sacral plexus, inferior gluteal nerve, common fibular part of the sciatic nerve and posterior femoral cutaneous nerve are located between the piriformis and accessory piriformis muscles make this case the most interesting of its kind. Awareness of these variations may prove to be useful for surgeons during the surgery of the gluteal region and the clinician when treating patients with buttock pain. Additionally, the possible role of aberrant anatomical variations of the related region in causing piriformis syndrome must be taken into consideration as one of the contributing factors.

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1. Introduction

In human anatomy, certain muscular and peripheral nerve variants may represent an unrecognized etiology. The muscular anatomical variations become apparent during the embryonic development. Despite resembling an improper or altered state of anatomical development, vast majority of these variations occur in a benign phenotype.¹

The piriformis muscle (PM) has a central location at the gluteal region. The sciatic nerve (SN) is the thickest nerve in the body and lies at the deep side of the PM. Considering this close anatomical proximity, the appearance of anatomical variations including PM and SN is not rare.^{2–5} Nevertheless, abnormalities of the SN and the PM can contribute to the occurrence of the piriformis syndrome (PS).^{3–5} The PS is known to cause to the non-discogenic sciatica and it usually occurs as secondary to the compression of the SN by abnormal PM.⁶ However, the possible role of aberrant anatomical variations of the related region in causing PS must be taken into consideration as one of the contributing factors, which is partly discussed in the current paper by referring to our case.

2. Case report

A case displaying unilateral variant muscle distal to the PM accompanied with high divisions of SN were encountered during a routine lower extremity dissection (10% formalin-fixed, 64-year-old male cadaver) in the Human Anatomy Department of the Near East University. In order to clarify the relationship between the origin and insertion parts of the PM and variant muscle, the further dissection was performed. The relationship between the nerves and the muscles were also noted. Each phase of the dissection was visualized by digital camera.

The PM fibers were running laterally through the greater sciatic foramen and inserted to the apex of the greater trochanter (GT) of the femur. We also encountered the fibers which have belonged to the gluteus medius and minimus muscles reaching to the PM. The variant muscle was lying parallel and distal to the main PM. The fleshy part of the variant muscle was observed to be originating from the pelvic surface around fifth sacral segment and a small part of origin of the sacrotubular ligament as separately from the PM. It was inserted into the medial side of the GT of the femur with its own tendon (Fig. 1). Based on the anatomical definitions of the variant muscle mentioned above, we suggest that this formation of the muscle can be described as an accessory piriformis muscle (APM), rather than a slip or a bundle of the PM.

Furthermore, by using a digital caliper, the length and width of the fleshy and tendinous part of the PM and the APM were

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plexus, might be crucial to the certain surgical approaches for the gluteal region and must be acknowledged by the surgeons.

Conflict of interest

All authors declare that they have no conflict of interest and the case was not supported or funded by any drug company.

Acknowledgments

The authors thank Prof. Dr. Selda Önderoğlu and Prof. Dr. Mehtap Tiryakioğlu for their guidance and support for this case. We also thank Assist. Prof. Dr. Nail Can Öztürk and Assist. Prof. Dr. Umut Fahrioglu for their help in reduction the manuscript.

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