

An unusual variety of double quadratus femoris muscle

*M. Kalniev**, *N. Krystev**, *D. Krystev***, *K. Vidinov****,
*L. Veltchev*****

* *Department of Anatomy and Histology, MU – Sofia*

** *College of Medicine “Jordanka Filaretova”, MU – Sofia*

*** *Department of Endocrine Surgery, MU – Sofia*

**** *State Hospital, Biala Slatina, General Surgery*

Quadratus femoris muscle is one of the muscles of the gluteal region. It takes part in the external rotation in the hip joint. During routine dissection in the section hall of the Department of Anatomy and Histology in Medical University – Sofia we came across a very interesting variation of a double quadratus femoris. We saw an additional belly situated below the main belly. Two bellies are clearly divided medially, but laterally they merged. We made series of pictures and did literature. There are very few literature data describing variations of quadratus femoris muscle. The existing data in the literature are concerned the fusion of adductor magnus and quadratus femoris and in other cases the fusion of the inferior gemellus and quadratus femoris [4]. Sometimes quadratus femoris is absent [1, 5]. It may be replaced by an unusually thick obturator internus muscle or by a large inferior gemellus [2, 4]. Quadratus femoris muscle may be divided at its femoral insertion into two parts: one posterior, with the normal attachment, and the other anterior, with insertion onto the intertrochanteric crest [3].

Introduction

Quadratus femoris muscle belongs to the muscles of the gluteal region with Glutaeus maximus, Glutaeus medius, Glutaeus minimus, Tensor fasciae latae, Piriformis, Obturator internus, Gemellus superior, Gemellus inferior and Obturator externus. The Quadratus femoris is a flat, quadrilateral muscle, situated between the Gemellus inferior and the upper margin of the Adductor magnus. It is separated from the last mentioned by the terminal branches of the medial femoral circumflex vessels. The Quadratus femoris starts from the upper part of the external border of the ischial tuberosity, and is inserted into the quadrate tubercle on the intertrochanteric crest and into the upper part of the quadrate line. A small bursa is often found between the front of this muscle and the lesser trochanter. The Quadratus femoris is supplied by the last lumbar and first sacral nerves. This muscle takes part in the external rotation in the hip joint. In some cases the muscle is absent.

Material and Methods

During routine dissection in February 2013 in the section hall of the Department of Anatomy and Histology in Medical University – Sofia we came across a very interesting variation of a double quadratus femoris. The quadratus femoris that presented anatomical variations was photographed using a Nikon Coolpix 995 camera with a 3,34 Megapixels. We made series of pictures and did literature.

Results



Fig. 1. The presence of an additional belly of quadratus femoris muscle situated immediately below to the main belly

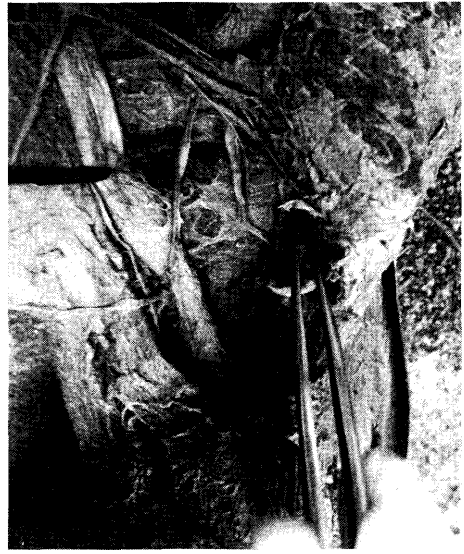


Fig. 2. The additional belly of quadratus femoris muscle started from ischial tuberosity and merged with the main belly



Fig. 3. Two bellies of quadratus femoris were clearly divided and their medial part was covered by the sciatic nerve.

Conclusion

We find very few literature data describing variations of quadratus femoris muscle. It is interesting to mention that existing data in the literature concerning the fusion of adductor magnus and quadratus femoris and in other cases the fusion of the inferior gemellus and quadratus femoris [4]. Sometimes quadratus femoris is absent [1, 5] or replaced by an unusually thick obturator internus muscle or by a large inferior gemellus [2, 4]. Quadratus femoris muscle may be divided at its femoral insertion into two parts: one posterior, with the normal attachment, and the other anterior, with insertion onto the intertrochanteric crest [3].

In our case the additional belly is clearly divided from the main belly medially, but laterally two bellies are merged. On the other hand this additional belly could be considered as the part of adductor magnus muscle, irrespective of the above mentioned fact, that two bellies of quadratus femoris were clearly separated. That should be considered when performing a surgery in the gluteal area especially with rear access to the capsule of the hip joint.

References

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