Bundle multiplicity in knee joint muscle: A rare morphological arrangement?

Multiplicidade de feixes no músculo articular do joelho: Uma disposição morfológica rara?

José Aderval Aragão
Federal University of Sergipe
E-mail: adervalufs@gmail.com

Juliana Lima dos Santos
Federal University of Sergipe
E-mail: julianalimamed@outlook.com

Maria Luiza Alarcon Mady Barbosa
Federal University of Sergipe
E-mail: marialuiza_alarcon@hotmail.com

Marcelo Diaz Nascimento
Federal University of Sergipe
E-mail: marcelodiaz777@yahoo.com.br

Gladson Gomes de Souza
Federal University of Sergipe
E-mail: gladsongsouza@gmail.com

Francisco Prado Reis
Tiradentes University and Alfredo Nasser University Center
E-mail: franciscopradoreis@gmail.com

ABSTRACT

Context: The importance of the knee joint muscle has been reported in several studies, both cadaveric and imaging. Its relevance is present in the occurrence of retropatellar or peripatellar pain, in which the muscle, by pulling the synovial membrane, prevents folds of the membrane from being compressed between the femur and the patella in the knee joint. Thus, it is a small muscle that extends from the anterior surface of the femoral shaft to the suprapatellar pouch, whose multiplicity of muscle bundles is often observed, ranging from 1 to 7 bundles. Anatomical knowledge of this variation would be relevant for anatomists and surgeons in bone tumor resections. Objective: To report the occurrence of a knee joint muscle with multiple muscle bundles. Case report: Routine dissection, performed at the Anatomy Laboratory of the Federal University of Sergipe, on a male human cadaver aged approximately 60 years. A knee joint muscle with four muscle bundles was found in the right thigh: lateral (largest), medial, medial intermediate (the smallest and only one that did not reach the joint capsule) and lateral intermediate. Conclusion: The knee joint muscle is most often substantial and discrete from the anterior compartment of the thigh, identifiable on cadaveric dissection. However, the presence of dissociated muscle bundles could provide support for monitoring its role in knee joint movements, as well as could establish its function during knee joint movement, and its anatomical knowledge would be relevant to the clinic in case it undergoes hypertrophy or

atrophy in parallel to the quadriceps muscles, as well as its functional implications in rehabilitation after knee joint dysfunction.

Keywords: Knee joint, Intermediate vessel, Muscle fiber type, Cadaver.