SUMMARY

A double plantaris muscle was observed in the right popliteal fossa during undergraduate medical dissection which was performed on a male cadaver of about 40 years. Its proximal belly originated from the lower part of the lateral supracondylar ridge, and the distal belly from the posterior aspect of the lateral femoral condyle. Both bellies had a single long tendon inserted into the calcaneum. After careful dissection, the muscle was observed to be innervated by the tibial nerve.

Key words: Accessory knee muscle – Popliteal region – Tennis leg – Triceps Sural

INTRODUCTION

Plantaris, a small fusiform muscle may arise from (a) the inferior division of linea aspera; (b) the posterior ligament of the knee; (c) fascia covering the popliteus muscle; (d) the fibula, between the flexor hallucis longus and the fibularis longus; (e) the oblique line of tibia; or (f) the lateral femoral condyle above the origin of the lateral head of the gastrocnemius. Insertion of plantaris has been reported with considerable variations. Plantaris may be inserted on (a) the soft tissues between gastocnemius and soleus; (b) the inner border of the tendo achilllis; (c) the dorsomedial surface of the calcaneal tendon; (d) the bursa between tendocalcaneus and calcaneum; (e) the fibrous tissue present in front of the calcaneum tendon; or (f) plantar aponeurosis (Le Double, 1897). Following variations of plantaris have been reported: 1) biceps plantaris; 2) incomplete form, i.e muscle missing in part of their length; 3) absence of muscle; 4) fusion with neighbouring muscles (Testut, 1884). Long tendon of plantaris is referred as freshman’s nerve. This muscle is considered as vestigial in humans, since it had its primitive attachment to the plantar aponeurosis, as is seen in some quadruped primates (Daseler and Anson, 1943). Injury of this muscle and tendon is known as “tennis leg”, characterised by pain in the posterior part of the knee (Spina, 2007).

CASE REPORT

A rare dual plantaris with considerable thickness was observed in the right knee of a male cadaver during routine dissection. The dissected cadaver was an unclaimed male body, aged about 40 years, brought to the anatomy department as per law of our country. We did not find such variation in the left knee. We found the proximal belly of plantaris (P₁) arising from the lower lateral supracondylar ridge and the distal belly of plantaris (P₀) from the posterior aspect of the lateral condyle of the femur (Fig. 1). Both muscle bellies were merging with each other, forming a long tendon running posteriomedially between the gastrocnemius and the soleus and, inserting on the calcaneum. This variation was found fusing with the lateral head of gastrocnemius. The gastrocnemius, soleus and plantaris tendon were dissected for clear visualisation. Morphometric measurement was taken...
and photographed. The proximal belly was 6 cm long, and PD was 11 cm long with 18.4 cm length of plantaris tendon. Plantaris was supplied by the tibial nerve.

**DISCUSSION**

Dual origin of plantaris is a rare case. Very few studies have described this variation. Unilateral double plantaris muscle was observed in a right knee with anomalous muscle belly of 1.44 cm and a usual belly of 1.27 cm with along tendon providing calcaneal attachment (Kwinter et al, 2010). Two bellies of plantaris with length of 9 cm and 7.5 cm were exposed in a female cadaver (Upasna and Ashwani, 2011). Another cadaveric study revealed a dual plantaris bilaterally. Outer and inner bellies were measured 4 cm and 2 cm respectively in the right leg. Left plantaris was measured 5 cm and 2 cm in length with respect to outer and inner bellies (Rana et al, 2006). A MRI study conducted on 1,000 knees exposed 63 accessory plantaris. Origin of 62 additional plantaris was merged with origin of normal plantaris and one was fused with origin of lateral head of gastrocnemius. These muscles inserted into iliotibial band, lateral patellar retinaculum or iliotibial tract (Herzog, 2011). Plantaris tendon is used for reconstruction of hand tendons, lateral ankle ligaments and for atrioventricular valve repair (Aragao et al, 2010).

In the present finding, the accessory belly had considerable thickness and length if compared with previous literature. This variation may mimic neoplasm while palpation. Therefore, patients with undefined leg pain should be examined carefully.

**REFERENCES**


