

Innervation of the extensor carpi radialis longus muscle in Brazilian individuals: Biometry of its origin and distribution [Inervación del músculo extensor radial largo del carpo en individuos brasileños: Biometría de su origen y distribución]

Pérez Mérida L.

Sousa Rodrigues C.F.

Olave E.

The extensor carpi radialis longus muscle (ECRLm) is located in the posterior compartment (extensorsupinator) of the forearm and has great importance in the closure of the hand. There are few biometric studies with respect to the point of origin of their branches of innervation, as well as on the distribution of them. For this study, 30 upper limbs, formalized, of Brazilian adult individuals were used, from the Faculty of Medicine of the Universidad Estadual de Ciências da Saúde de Alagoas, Maceió, Brazil. After locating the nerve, we measured the distance between the origin of the primary branch and that of the motor points with respect to biepicondilar line (BEI), which were visualized and dissected using a magnifying glass. The nerve in question was observed at the level of the arm or proximal to BEI in 28 cases (93%) and the remaining 2 at the level of this line (7%). The branches for the ECRLm originated from the radial nerve, observing a primary branch in 20 limbs (80%), and in the remaining 10 (20%) two primary branches were observed, averaging 1.3 branches (SD 0.5). The most proximal origin of the first primary branch (PB) independent of whether there was 1 or 2 was on average 3 cm (SD 1.0) proximal to BEI. The most distal MP was distal to BEI in 24 cases with an average of 1.9 cm (SD 1.0); location at the BEI level in 3 cases. Only in 3 cases was the most distal MP found proximal to BEI, an average of 0.8 cm (SD 0.5). The distribution of motor points was variable, since many times the PB bifurcated into secondary branches and these, in turn, could divide up to 6 times in tertiary branches that penetrated in the muscle. The biometric knowledge of the origin of the nerve of the ECRLm, as well as its distribution, is an important contribution to the anatomico-surgical area, as well as its use in nerve blocks, nerve transfers and electrode placement areas for purposes of electrical stimulation in patients they need to rehabilitate

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Anatomy

Extensor carpi radialis longus muscle

Motor points

Radial nerve