

Morphometry of nerve branches for plantar interossei muscles in the foot of man [Morfometría de los ramos nerviosos para los músculos interóseos plantares del pie en el hombre]

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Innervation of the foot has required special attention in view of its use in clinical and surgical treatment of painful diseases and syndromes such as talalgia, plantar fasciitis and plantar fibromatosis are among those mentioned. Studies realized have made possible the functional significance of plantar interossei muscles. However, there is no information regarding greater detail of their innervation. A morphometric study was carried out in 5 nerve branches for the first, second and third plantar interossei muscles in cadavers of adult male individuals. Cross sections were obtained of each one of the nerves after their origin, at the deep level of the plantar region of the foot. Cuts of 4 μ m thick were realized which were stained with Hematoxylin-Eosin (H.E.). Average fascicles in the branch for the first interosseous muscle (R1 IOP) was 1 (D.E. 0,00); for the second interosseous muscle (R2 IOP) was 2 (D.E. 0.45); and for the third interosseous muscle (R3 IOP) was 2 (D.E. 1.00). The average of fibers for the I R1 IOP, R2 IOP was: 547 (D.E. 153), 644 (D.E. 258) and 1.161 (D.E. 465) respectively. The average area of R1 IOP, R2 IOP Y R3 IOP was: 0.06 mm² (D. E. 0.02), 0.08 mm² (D. E. 0.03), 0.14 mm² (D. E. 0.06), respectively. The morphometric and stereological study of these nerve branches is expected to contribute to the information available to professionals who must clinically and surgically treat the plantar region of the foot.

Innervation and Morphometry

Plantar interossei muscles