

# Dorsal branch of the ulnar nerve: A significant contribution to the sensory innervation of the dorsum of the hand [Ramo dorsal del nervio ulnar: Un aporte significativo a la inervación sensitiva del dorso de la mano]

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The sensory innervation of the dorsum of the hand is mainly given by branches from the superficial branch of the radial nerve (SBRN) and the dorsal branch of the ulnar nerve (DBUN). The distribution of the first, cover the area from the thumb to the radial half of the ring finger and the second, the ulnar half of this finger and the little finger. This study aimed to describe the origin, course, distribution and branches of DBUN. The study by dissection was performed in 30 upper limbs of adult Brazilian individuals and 6 upper limbs of adult Chilean individuals, fixed in 10% formaldehyde, 16 of which were members of the right side and 20 on the left. The first individuals were located in the Universidade Estadual de Ciências da Saúde, Alagoas, Brazil and the second, in the Faculty of Medicine, Universidad de La Frontera, Chile. The DBUN originated at the distal third of the forearm proximal to the ulnar styloid process in 34 limbs (94.4%). In all samples the DBUN distribution in the dorsum of the hand behaves similarly with the difference of having or not a communicating branch with the SBRN. Accordingly we classify in a group with communicating branch and another without communicating branch. 21 samples (58.3%) with communicating branch and 13 (36.1%) without it were observed. The division patterns of the dorsal branch of the ulnar nerve is described. In 21 cases the DBUN gave 5 digital nerves corresponding to the little finger, ring finger and the ulnar side of the middle finger. However, in these cases the DBUN received fibers from SBRN. In 13 cases (36.1%) the DBUN gave 5 dorsal digital nerves, corresponding to the minimum finger, ring finger and the ulnar side of the middle finger, without collaboration of the SBRN. In 2 cases (5.6%) the dorsal digital nerves were provided only by the SBRN without DBUN contributions. In relation to the

presence of communication between DBUN and SBRN the component fibers were originated from SBRN and ended on the lateral branch of DBUN. The disposition of the DBUN has not large variation in distribution and has a significant contribution to the sensory innervation of the dorsum of the hand.

Anatomy

Dorsal branch of ulnar nerve

Hand

Sensory innervation