



**Median nerve branches for flexor carpi radialis ,flexor digitorum superficialis and pronator teres :  
cadaveric study for potential use in neurotization procedurosto the radial nerve at the elbow**

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**Introduction**

Many donor nerves have been used for brachial plexus neurotization procedures. Neurotization of median nerve branches to the flexor carpi radialis,flexor digitorum superficialis and pronator teres to the radial nerve at the elbow .

**Methods**

Four formalin fixed adult human cadavers (8 sides) ,(2 female and 2 male) were used for this study. The mean age at death of these specimens was 60 years . In the supine position, an incision was made over the cubital fossa and the skin removed. The median nerve was dissected and its branches to the pronator teres observed and measured. None of the cadavers exhibited any evidence of gross pathology, previous surgical procedures, or traumatic lesions to the area studied.

Once branches to the pronator teres ,flexor carpi radialis and flexor digitorum superficialis were identified, they were sectioned distally at their entrance into the muscle and tunneled laterally deep to the biceps brachii muscle to reach the radial nerve in the cubital fossa erve at the cubital fossa . Distal transection was then performed to determine the appropriate length so that the structure could be brought to the laterally positioned radial nerve.

**Results**

All specimens were found to have a median nerve branches to the flexor carpi radialis,flexor digitorum superficialis and pronator teres was long enough to reach the radial nerve in the cubital fossa. Neural connections remained tension free with full pronation and supination. No gross evidence of injury to surrounding neurovascular structures was identified at the nerve harvest site.

**Learning Objectives**

Neurotization techniques improve the functional outcome in peripheral nerve injury .

**References**

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**Conclusions**

Based on the results of the cadaveric study, the use of the branch of the median nerve to the flexor carpi radialis,flexor digitorum superficialis and pronator teres muscle may be considered for neurotization



**Median Nerve branches at the level of cubital fossa**

