

Injuries of the Terminal Branches of the Infraclavicular Brachial Plexus: Patterns of Injury, Management & Outcome

Content

Hems TE, Mahmood F. Injuries of the terminal branches of the infraclavicular brachial plexus: patterns of injury, management and outcome. *J Bone Joint Surg Br.* 2012 Jun;94(6):799-804. doi: 10.1302/0301-620X.94B6.28286.

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We reviewed 101 patients with injuries of the terminal branches of the infraclavicular brachial plexus sustained between 1997 and 2009. Four patterns of injury were identified: 1) anterior glenohumeral dislocation (n = 55), in which the axillary and ulnar nerves were most commonly injured, but the axillary nerve was ruptured in only two patients (3.6%); 2) axillary nerve injury, with or without injury to other nerves, in the absence of dislocation of the shoulder (n = 20): these had a similar pattern of nerve involvement to those with a known dislocation, but the axillary nerve was ruptured in 14 patients (70%); 3) displaced proximal humeral fracture (n = 15), in which nerve injury resulted from medial displacement of the humeral shaft: the fracture was surgically reduced in 13 patients; and 4) hyperextension of the arm (n = 11): these were characterised by disruption of the musculocutaneous nerve. There was variable involvement of the median and radial nerves with the ulnar nerve being least affected. Surgical intervention is not needed in most cases of infraclavicular injury associated with dislocation of the shoulder. Early exploration of the nerves should be considered in patients with an axillary nerve palsy without dislocation of the shoulder and for musculocutaneous nerve palsy with median and/or radial nerve palsy. Urgent operation is needed in cases of nerve injury resulting from fracture of the humeral neck to relieve pressure on nerves.

PMID: 22628595 [PubMed – indexed for MEDLINE]