26 Peripheral Nerve Surgery

The Anatomy of the Berrettini Branch: Implications for Carpal Tunnel Release
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Introduction.—The use of the endoscopic carpal tunnel release (ECTR) procedure has been associated with increased iatrogenic injury of the Berrettini branch, or superficial communication, between the median and ulnar nerves. This injury can cause alteration in sensibility of the middle and ring fingers. In the literature, the Berrettini branch has been described as a normal finding and as an anatomical variation; it has also been totally ignored. Dissections were performed in 100 fresh cadaver palms to ascertain the frequency with which superficial palmar communication between the median and ulnar nerves occurs and to what extent it may cause iatrogenic injury during ECTR.

Findings.—Hands were classified into 4 groups (Fig 1 and Table 1). In group 1 (12 hands), communication was directed obliquely from the ulnar to the median nerve and originating more than 4 mm above the distal margin of the transverse carpal ligament (TCL); in group 2 (16 hands), communication was directed parallel to the distal margin of the TCL; in group 3 (53 hands), communication was directed obliquely from the ulnar nerve to the third common digital nerve, originating below the distal margin of the TCL; and in group 4 (0 hands), an atypical communication was directed from the median to the ulnar nerve, sometimes with a double-communicating branch. Superficial communication between the median and ulnar nerves was observed in 81 (81%) of the palms. Communication was not present in 9 and 10 right and left hands, respectively.

Conclusion.—The Berrettini branch may be considered a normal anatomical finding. In 28% of the hands, the branch was proximal to the edge of the distal ligament and was thus prone to iatrogenic injury in both 1-portal and 2-portal endoscopic surgery.
Petro Berrettino Cortonemsi, a famous painter of Saint Cecilia, first illustrated the palmar superficial communication between the ulnar and median nerves in *Tabulae Anatomicae*, published in 1741. Some have referred to this purely sensory connection between these nerves as the “Berrettini branch.” This sensory communication between the ulnar and median nerves may very well account for some patients who, with carpal tunnel syndrome, experience paresthesias in all digits. The authors’ surgical implications are certainly noteworthy; however, I must add that I have not encountered this sensory complication after performing well over 100 endoscopic carpal tunnel releases. I suspect that those who have not encountered this complication have developed an excellent technique, especially for feeling the distal edge of the transverse carpal ligament and subsequently creating the exit portal precisely at this point, thereby obviating injury.

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