the stimulating electrode is gradually moved towards to the neighboring nerve.

References


Letters to the Editor / Clinical Neurophysiology 117 (2006) 1876–1883

Reply to “The frequency of ulnar to median nerve anastomosis (Marinacci communication)”

We appreciate the critical comments made by Amoiridis et al. regarding our paper on Marinacci communication (Meenakshi-Sundaram et al., 2003), which is indeed rarely reported in literature (Kimura et al., 1983; Marinacci, 1964; Stancic et al., 2000). When we mentioned in our paper regarding unexpected and/or unexplained change in the amplitude of compound muscle action potential (CMAP) between the proximal and distal sites of stimulation we indeed meant that the CMAP over abductor pollicis brevis (APB) was less than 80% on median elbow than wrist stimulation. In our patients, we found an apparent conduction block pattern on median elbow stimulation and the CMAP amplitude showed no further increase on increasing the stimulus strength to the supramaximal current thus avoiding submaximal stimulation. Hence, the error of having mimicked Marinacci anastomosis could be avoided. We then inched our stimulating (not recording) electrode towards the site of ulnar elbow stimulation. While CMAPs with normal morphology were obtained at this site, in the intervening areas we could not record such potentials. This along with care to avoid higher stimulus strength was the precaution taken to avoid volume-conducted potentials and this point was emphasized in the manuscript. After reading the comments on the F-waves, we tried to record it on APB on ulnar elbow stimulation in normal controls and compared with the F-waves obtained in Marinacci communication. While in normal subjects they were infrequently or rarely obtained (persistence 10%), these F-waves were consistent in patients with Marinacci communication (persistence 60%). The potentials we obtained on the APB on ulnar wrist stimulation were indeed of higher amplitudes than those obtained proximally in the right arms of case 1 and 2 as have been pointed out by Amoiridis et al., which are contrary to the expected findings of proximal potentials being of higher amplitudes than the distal potentials described earlier in Marinacci communication. However, these potentials were obtained with initial positivity and were most likely volume conducted from ulnar innervated thenar muscles. In Marinacci communication, where the anastomosis is at the level of forearm it is puzzling for us to see the normal appearing potentials on distal ulnar stimulation unless the recording site was over ulnar innervated muscles. In our study, the thenar muscle was always the APB and in the two patients where we got the potentials on wrist ulnar stimulation, CMAPs with initial positivity were obtained. We reviewed the data published by Streib and it was not matching with our report and this error is regretted (Streib, 1979).
References


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