

Background A proximal deep peroneal nerve (DPN) injury can significantly impact the functional capacity of the leg, to include compromised motor function of the tibialis anterior (TA) muscle. Clinical examination can range from weakness in ankle dorsiflexion, to complete foot drop. Diagnostic nerve conduction velocity (NCV) testing can demonstrate abnormalities at select areas of impingement (or) entrapment (i.e., regions affected by a demyelinating compression mono-neuropathy), along the proximal course of the common peroneal nerve. Methods We retrospectively report on 17 patients with clinical weakness involving ankle dorsiflexion. All patients underwent surgical end-to-side anastomosis, transferring a muscular nerve branch from the superficial peroneal nerve (SPN) to a segment of the DPN responsible for TA muscle innervation. Outcomes were based on comparisons of preoperative and postoperative DPN motor function to the TA muscle, standardized to the British Medical Research Council Scale for Muscle Strength. Preoperative scores were generally M2 or below. Results Postoperative outcome scores of M4 to M5 were considered good (or) successful. 94.1% of patients demonstrated successful outcomes.