

Table 1

Tarsal Tunnel Syndrome Evidence Table and Clinical Data

Ref.	Class	Criteria Met	Type of Article	Number Control subjects	Assembly Method	Duration of Symptoms	Age Mean (range) Years	Male %	Examination Findings			
									Burning or Tingling/Aggravation by Activity/Nocturnal Exacerbation	Tinel's Sign on Exam	Altered Plantar nerve sensation on exam	Weakness of Intrinsic Foot Muscles
8	III	6	P CS	13/25	Consecutive admissions for TTS surgery	NA	44.1 (17-74)	31	8/13 NA 8/21	13/13	NA	NA
20	III	6	R CS	21 (25 feet)/NA	Not given	NA	NA (14-69)	52	25/25 NA NA	13/25	22/25	0
12	III	5	P CC	21/45 (historic)	Patients referred consecutively with diagnosis of TTS	2-18 months	52 (28-78)	NG	21/21 NA 16/21	NA	8/21	2/21
21	III	6	P CS	17/20 (21 nerves)	Patients with a clinical diagnosis of TTS	3 weeks – 4 years	NA	59	19/21 21/21 5/21	19/21	15/21	4/21

P= Prospective; R= Retrospective; CC= case control; CS= case series; NA= not applicable; NG= Not given; TTS= tarsal tunnel syndrome;

Table 2

Summary of EDX Techniques and Findings used to Assess for Tarsal Tunnel Syndrome

Article / Reference Number	Motor NCS	Sensory NCS	Mixed NCS	Needle EMG	Conclusions
8	Tibial nerve stimulation at ankle, with recording over AH (MPN). Abn in 3/14 nerves (PDL).	Surface electrode recording at ankle following stimulation of MPN (great toe) and LPN (little toe). Abn in 14/14 nerves. Abn MPN in 13/14 (NR 8, LA 2, SCV 4). Abn LPN in 14/14 (NR 13, SCV 1).	MPN and LPN stimulation in sole, with recording at ankle (14cm). Abn in 12/14 nerves. Abn MPN in 10/14 (NR 1, LA 7, SCV 2). Abn LPN in 11 (NR 6, LA 4, SCV 1).	Not performed	Sensory NCSs are more sensitive, but less specific, than mixed NCSs for TTS; both are more sensitive than motor NCSs.
20	Tibial nerve stimulation at ankle, with recording over AH (MPN) and ADQ (LPN). Abn in 5/24. Abn MPN in 2 (PDL 1, LA 1). Abn LPN in 3 (PDL 3).	Near-nerve recording at ankle following stimulation of MPN (great toe), LPN (little toe), and each interdigital nerve. Abn in 24/25. Abn MPN in 24. Abn LPN in 13.	Not performed	Not performed	SCV and dispersion phenomenon are the most prominent abnormalities revealed in sensory studies for TTS evaluation.
12	Tibial nerve stimulation at ankle, with recording over AH (MPN) and ADQ (LPN).	Not performed	Not performed	Not performed	CMAP amplitude and duration are more sensitive than distal latency in diagnosing TTS.
21	Tibial nerve stimulation at ankle, with recording over AH (MPN) and ADQ (LPN). Abn in 11/21. MPN PDL 10, LA 7. LPN PDL 7, LA 7.	Surface recording at ankle following stimulation of MPN (great toe) and LPN (little toe) stimulation. Abn in 19/21. Abn MPN in 16/21 (NR 11, LA 6, SCV 5). Abn LPN in 12/18 (NR 10, LA 3, SCV 2).	Not performed	Not performed	Sensory NCSs are more sensitive than motor NCSs for diagnosing TTS.

Abn = abnormal ADQ = abductor digiti minimi AH = abductor hallucis CMAP = compound muscle action potential
 LA = low amplitude LPN = lateral plantar nerve MPN = medial plantar nerve NCS = nerve conduction study NR = no response
 PDL = prolonged distal latency SCV = slow conduction velocity TTS = tarsal tunnel syndrome.

Table 3**Summary of medial and lateral plantar nerve studies**

Reference Number	Number Subjects/ Age (range in years)	MPN Sensory NCS Number with response	MPN Mixed NCS Number with response	LPN Sensory NCS Number with response	LPN Mixed NCS Number with response
19	108 (30-89)	-	105/108	-	-
3	51 (23-57)	47/51	51/51	42/51	43/51
15	75 (19-62)	150/150	-	-	149/150
22	59 (14-85)	-	100/100	-	75/95
11	30 (15-49)	60/60	-	60/60	-
23	41 (20-76)	-	41/41	-	41/41
10	69 (13-81)	66/69	-	-	-
13	30 (20-36)	30/30 *	-	-	-
17	72 (44 ± 12.7)	71/72 *	-	-	-

LPN = lateral plantar nerve MPN = medial plantar nerve NCS = nerve conduction study * = near-nerve recording at the ankle