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– Abstract –

Diabetic Penile Neuropathy: Relationship with Polyneuropathy

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Objectives : The sexual dysfunction is common in male diabetic patients. This is generally attributed to a peripheral neuropathy involving the nerves controlling penile erection. In diabetic polyneuropathy, most distal sensory nerve fibers are initially involved by ‘dying back phenomenon’. Dorsal penile nerves are also a distal sensory nerves as well as distal sensory nerves of extremities. In our clinical experience, diabetic polyneuropathy is frequently developed in company with sexual dysfunction. It led us to suspect that the diabetic penile neuropathy could be a kind of polyneuropathy.

Methods : The relationship between diabetic penile neuropathy and polyneuropathy was evaluated by using electrical sensory nerve conduction studies of dorsal penile nerves and sural nerves.

Results : Penile neuropathy had high correlation with sensory polyneuropathy.

Conclusions : The results suggest that the penile neuropathy is a kind of diabetic polyneuropathy.

Key Words : Diabetes mellitus, Penile neuropathy, Polyneuropathy

가 31.5%, 26%
 가 57.5% 가 ,
 24%, 5.6%
 libido 가 .

가 40 60% ,
 ,^{3,4} 50%가 ,⁵⁻⁷
 가 가 .
 Miccoli ²

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splint device
 10 가 , 0.1
 11 msec 가 ,
 Ellenberg⁶ 가 4 cm 3 cm 3 msec/division
 80% 20 50
 12 EDRF(Endothelium Derived Relaxation Factor) Vasoactive polypeptide가 2
 13 가 30 33
 (lateral malleolus) 3 cm
 14 cm 0.1 msec 1
 “dying back” Hz 1.5 KHz , 10 microV/cm, 3
 14-16 msec/division 20 50 t
 (dorsal penile nerve) 가
 Lin Bradley¹⁷가 (claudication)
 (sural nerve) , 4
 terone prolactin testos-
 54.6 56.6
 16 16 10.7 ,
 11.4
 50
 60 37.81 ± 3.14 m/sec, 29.58 ± 2.30 m/sec(t
 testosterone prolactin value, 8.46) ,
 neuromatic 2000(Dantec) 41.94 ± 5.83 m/sec, 34.10 ± 4.06 m/sec(t

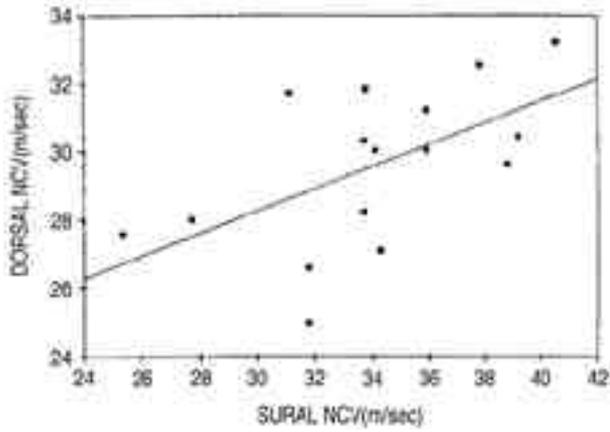


Fig. 1. The degree of correlation between mean sensory nerve conduction velocities of dorsal penile nerves and those of sural nerves in sexual dysfunction group of diabetes mellitus. Correlation coefficient was 0.57. Dorsal NCV: Sensory nerve conduction velocities of dorsal penile nerves, Sural NCV: Sensory nerve conduction velocities of sural nerves.

value, 4.42)

, 0.57)

(Fig. 1).

(cortical pudendal somatosensory evoked potential),²³
(bulbocavernous reflex),^{24,25}

(sensory nerve conduction of dorsal penile nerve)²⁶

Bradley¹⁷가

S1, S2 S3

가

가 30

가

7,24

가

(redundancy)

. Bradley ²⁴

가

, 1 pound 2 pound

가

(viscoelasticity)

가

device

가

Clawson³¹

, Cunningham incontinence clamp

Clawson³¹

Clawson³¹

가

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