

SUMMARY

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The objective of the present work was to assess the effectiveness of the Semmes-Weinstein monofilaments as an instrument for the assessment of the sensitivity of the feet of patients with *diabetes mellitus*.

A comparative analysis was made between the Semmes-Weinstein method and the electro-physiological examination of nerves in diabetic patients. Correlations were also established between the clinical findings of the patients and the degrees of involvement of the peripheral nerves as detected by the examination with monofilaments.

Thirty five non-insulin dependent patients were assessed, of which 16 were females and 19 males, between 39 and 72 years of age, averaging 56 years, and a period of illness varying between 2 and 30 years, with an average of 11 years.

For the nerve conduction study, measurements were taken of the amplitude and the latency of the sympathetic cutaneo-plantar response, the amplitudes and sensitive action potentials and the conduction velocity of the sural nerve. Also studied were the posterior tibial nerve (distal latency) and the fibular nerve (distal and proximal latencies and conduction velocity along the leg). For these last two nerves the delayed latencies, F waves were also measured.

The study of sensitivity to touch and pressure was conducted using a set of nylon monofilaments of 0.05g, 0.2g, 2g, 4g, 10g, and 300g.

Spearman's non parametric coefficient of correlation was calculated between the two method giving $r = 0,677$, wich is considered statistically significant.

As for the correlation between the clinical examination of the patient's feet and the assessment by monofilaments, it was established that there was a close association between the more advanced degrees of sensory involvement detected by this method and the alterations observed, such as plantar ulcer, claw toes and paralysis of the intrinsic musculature of the foot, permitting a reliable accompaniment of the evolution of the alterations of the peripheral nerves affected by the pathology.