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Hospital-Based Diabetic Neuropathy: Prevalence in Eastern Black Sea Region of Turkey

Dear Sir,

We determined the frequency of diabetic neuropathy at a tertiary care academic center in the Eastern Black Sea region of Turkey. This hospital serves a population of approximately 3 million. Between January, 1993 and May, 1996, we recruited diabetic patients for a neurophysiological workup from our University Hospital clinics and from local hospitals in the region. Detailed medical records of the current and past diabetic history were abstracted. The patients were evaluated clinically and electrophysiologically. Daily insulin dose requirements, physical and neurological examinations, history of any medications predisposing to neuropathy, presence or absence of retinopathy, and hearing status were evaluated and, on the basis of this information, nondiabetic neuropathies were eliminated. If diabetic cranial neuropathy was suspected, patients were evaluated by appropriate neuroradiological investigations. Two hundred and ninety-seven diabetic patients were investigated with nerve conduction studies, skin sympathetic responses, visual and brainstem au-

ditary evoked potential techniques according to a diabetic neuropathy study protocol [1]. Polyneuropathy was defined using Dyck's [2] criteria. The patients were grouped according to presence or absence of neuropathy and classified as noninsulin-dependent diabetes mellitus (NIDDM) or insulin-dependent diabetes mellitus (IDDM). Differences between those with and without neuropathy and between patients with NIDDM and with IDDM were analyzed with the Student t test. Correlation analyses were also performed.

After adjusting for age and sex, values exceeding the normal means of our laboratory by 2 standard deviations were considered abnormal.

In 92 of 297 patients (31%; 95% confidence interval (CI), 24.1–37.9%) diabetic neuropathy was detected. In 80 of the 92 patients with neuropathy (86.9%), diabetic distal symmetric polyneuropathy (DDSPN) was present; in 7 patients (7.6%) femoral amyotrophy was found, and in 3 patients (3.2%), isolated oculomotor nerve palsy occurred. Two patients

(2.1%) were diabetic and cachectic and distal symmetric polyneuropathy occurred due to nutritional deficiency. The prevalence of IDDM was 21% (95% CI, 15.7–26.3) and 54% had NIDDM (95% CI, 50.1–57.9). DDSPN was identified as the most frequent type of diabetic neuropathy. The overall frequency of neuropathy found in this region was about the same as that of a similarly conducted English multicenter study [3] which showed a frequency of 28.5%.

References

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