

Oral presentation

Are there different vascular pathologies in non-hereditary neuropathies of axonal type?

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Aims

This study refers to the problem of the etiological heterogeneity of primary axonal neuropathies, which appear in a relatively monotonous morphology. Investigations of the vascular parenchyma of peripheral nerve biopsies were carried out to determine possible specific vascular pathomorphological features in context of each patient's medical history.

Methods

Sural nerve biopsies of the last 3 years in our institute were studied (n = 76). Cases with primary axonal neuropathic changes were investigated with regard to the vascular pathology of epi- and endoneural vessels. Conventional histology, immunohistochemistry and electron microscopy were performed and a semiquantitative analysis of number, distribution and thickness of vessels and cellular proliferation is given.

Results

In our examination of the nerve parenchymal vessels, four groups with common patterns of vasopathic lesions could be subdivided: 1) primary endoneural microangiopathic type; 2) primary endo- and epineural angiopathic type with involvement of small arteries and heterogenous distribution of axonal atrophy; 3) subtype with fibromuscular dysplastic-like features; 4) secondary concentric stenosing type of endo- and epineural vessels after inflammatory or demyelinating diseases.

Conclusion

In view of the uniform morphological appearance of the peripheral nervous parenchyma in cases of axonal neuropathy the precise examination of the vasculature can

help in elucidating the etiopathogenesis of the underlying disease. To achieve the best clinicopathological correlation full access to all clinical data is an urgent condition.