

Neurosonographic findings in non-systemic vasculitic neuropathy

Daniela Leupold, Ansgar Felbecker, Barbara Tettenborn & Thomas Hundsberger

Aim: The value of ultrasound of peripheral nerves in acquired immune-mediated neuropathies has been recently reported. The impact of neurosonography in vasculitic neuropathy is yet to be defined. We report the correlation of electrophysiological and ultrasound studies in a patient with nonsystemic vasculitic neuropathy at first diagnosis and in response to immunosuppressive therapy.

Case Report: A 44-year-old female presented with neuropathic pain and allodynia at the scapula radiating along the dermatoms C8/Th1 on the right arm of 1 month duration. On follow-up, an electrifying pain was localised at the fingertips of the left hand and in the region of the right knee. Additionally, the patient complained about weakness of the right intrinsic hand muscles.

Diagnostic workup: Electrodiagnostic studies of the median and ulnar nerve were consistent with axonal neuropathy in a multifocal pattern. Clinical, laboratory and radiology evidence of non-neuromuscular involvement and systemic rheumatological diseases were absent. On nerve ultrasound massive patchy swelling of the median and ulnar nerve were detected bilaterally. At the site of nerve enlargement compression was painful. Hence, the diagnosis of non-systemic vasculitic neuropathy was made by fulfilling 5 of 6 diagnostic criteria (Collins et al., Neurology 2003). Nerve biopsy was not feasible according to the affected sensorimotor nerves (i.e. median nerve). As high-dose steroids were insufficient we escalated treatment to monthly i.v. cyclophosphamide. After two months of treatment the nerve conduction studies as well as neurosonography improved. The enlargement of single nerve fascicles diminished but overall swelling of the affected nerves were still present.

Conclusions: Superficial peripheral nerves can be easily investigated by high-resolution neurosonography and provide an useful complementary tool to electrodiagnostic studies. Morphological analysis of nerves and changes due to therapy could be well visualized. Ultrasound studies in vasculitic neuropathy are rare, but might be an ancillary technique to guide non-invasive diagnosis. Additionally, neurosonography might be useful to target nerve biopsy and to monitor therapeutic efficacy.



type	conference paper/poster (English)
name of conference	Jahrestagung 2015 Schweizerische Neurologische Gesellschaft (Bern, Schweiz)
date of conference	30-10-2015
pages	1
publisher	Swiss Archives of Neurology and Psychiatry