P.066

A 65 year-old male with subacute asymmetric, proximal more than distal upper extremity weakness with associated paresthesias and pain

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Background: Neuroborreliosis affects approximately 10-15% of people with untreated Lyme disease and typically declares itself 2-18 weeks after infection. North American neuroborreliosis often manifests with cranial nerve palsy, meningitis, and/or radiculoneuritis. Methods: Here we describe a case of North American neuroborreliosis and also highlight some of the rare manifestations of systemic Lyme disease. A 65-year old male presented with a subacute history of progressive upper extremity weakness, neck pain, and headache. This occurred in the context of a recent tick exposure. Results: MRI of the brachial plexus, serology and CSF studies, and EMG/NCS were consistent with a diagnosis of polyradicular neuroborreliosis. However, whole body imaging identified some concerning features suggestive of lymphoma: specifically a large necrotic mediastinal lymph node and a number of vascular abnormalities. In light of these findings, the differential also included neurolymphomatosis and a PET scan was conducted. Reassuringly, there was no increase in FDG avidity in the distribution of his affected nerves. Moreover, his neurologic symptoms exhibited clinical improvement following treatment of his neuroborreliosis. Conclusions: This case provides an excellent example of the clinical features of neuroborreliosis, but more importantly also highlights some of the rarer potential manifestations, which warrant further investigation.

Multi-society

Headache

P.067

Pharmacological prophylaxis for chronic migraine: A systematic review and network meta-analysis of randomized controlled trials

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Background: We performed a network meta-analysis of randomized controlled trials to assess the comparative effectiveness of available pharmacological prophylaxis for migraines. Methods: We searched MEDLINE, EMBASE, Web of Science, Scopus, PsycINFO and Cochrane CENTRAL up to October 2023 for trials that: (1) enrolled adults diagnosed with chronic migraine, and (2) randomized them to any prophylactic medication vs. another medication or placebo. We performed a random-effects frequentist network meta-analysis for patient-important outcomes. Results: We included 193 randomized trials. Compared to placebo, CGRP monoclonal antibodies (mean difference [MD] -1.7, 95%CI: -1.1 to -2.2), injection of botulinum toxin (MD -1.8, 95%CI: -0.7 to -2.9), calcium channel blockers (MD -1.8, 95%CI: -0.5 to -3.0), beta-blockers (MD -1.4, 95%CI: -0.2 to -2.6), and anticonvulsants (MD -1.1, 95%CI: -0.4 to -1.8) were among the most effective treatments in reducing average number of headache days per months. Anticonvulsants (Risk Ratio [RR] 2.3, 95%CI: 1.8 to 3.0), calcium channel blockers (RR 1.8, 95% CI: 1.1 to 3.1), and tricyclic antidepressants (RR 2.3, 95% CI: 1.3 to 3.8) showed the highest risk of discontinuation due to adverse events. Conclusions: Our findings suggest that CGRP inhibitors, botulinum toxin, and beta-blockers may provide the greatest benefit, and tolerability, for reducing the frequency of migraine headaches.

Neuro-oncology

P.068

Malignant transformation of a spinal dermoid cyst into carcinosarcoma

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Background: Spinal dermoid cysts are uncommon, benign tumours of ectodermal origin, often associated with spinal dysraphism. Malignant transformation of spinal dermoid cysts is an exceptionally rare entity, with transformation into carcinosarcoma not previously reported. Methods: Case report and literature review Results: A 41-year-old male presented with a recurrent lumbar intradural mass, 28 years after resection of a dermal sinus tract and associated dermoid cyst. Intraoperative appearance and subsequent pathology were again consistent with a dermoid cyst. The patient re-presented 2 weeks after surgery with diplopia and headache due to hydrocephalus, thought to be due to chemical meningitis. Following ventriculoperitoneal shunt implantation, the patient rapidly deteriorated with progressive neurologic deficits and widespread leptomeningeal enhancement. A repeat spinal leptomeningeal biopsy was pursued, which revealed malignant transformation of the dermoid cyst into invasive carcinosarcoma. Without curative treatment options, the patient was palliated and died 85 days after admission. Conclusions: Malignant transformation of spinal dermoid cysts should be considered in the differential diagnosis of patients with dermoid cysts and progressive leptomeningeal enhancement. False negatives can occur with initial tumour pathology and repeat sampling may be warranted for diagnostic clarity. To the authors knowledge, this is the first report of a spinal dermoid cyst with malignant transformation into carcinosarcoma.

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