

Tick Induced Facial Nerve Paresis: A Narrative Review

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Abstract : Background: We present a literature review examining the research surrounding tick paralysis resulting in facial nerve palsy. A case of an intra-aural paralysis tick bite resulting in unilateral facial nerve palsy is also discussed. Methods: A novel case of otoacariasis with associated ipsilateral facial nerve involvement is presented. Additionally, we conducted a review of the literature, and we searched the MEDLINE and EMBASE databases for relevant literature published between 1915 and 2020. Utilising the following keywords; 'Ixodes', 'Facial paralysis', 'Tick bite', and 'Australia', 18 articles were deemed relevant to this study. Results: Eighteen articles included in the review comprised a total of 48 patients. Patients' ages ranged from one year to 84 years of age. Ten studies estimated the possible duration between a tick bite and facial nerve palsy, averaging 8.9 days. Forty-one patients presented with a single tick within the external auditory canal, three had a single tick located on the temple or forehead region, three had post-auricular ticks, and one patient had a remarkable 44 ticks removed from the face, scalp, neck, back, and limbs. A complete ipsilateral facial nerve palsy was present in 45 patients, notably, in 16 patients, this occurred following tick removal. House-Brackmann classification was utilised in 7 patients; four patients with grade 4, one patient with grade three, and two patients with grade 2 facial nerve palsy. Thirty-eight patients had complete recovery of facial palsy. Thirteen studies were analysed for time to recovery, with an average time of 19 days. Six patients had partial recovery at the time of follow-up. One article reported improvement in facial nerve palsy at 24 hours, but no further follow-up was reported. One patient was lost to follow up, and one article failed to mention any resolution of facial nerve palsy. One patient died from respiratory arrest following generalized paralysis. Conclusions: Tick paralysis is a severe but preventable disease. Careful examination of the face, scalp, and external auditory canal should be conducted in patients presenting with otalgia and facial nerve palsy, particularly in tropical areas, to exclude the possibility of tick infestation.

Keywords : facial nerve palsy, tick bite, intra-aural, Australia

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