LESSER OCCIPITAL NERVE ENTRAPMENT AND THORACIC OUTLET SYNDROME MIMIC CRPS ON A PEDIATRIC PATIENT

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Introduction
To reinforce the importance of the mechanics of the lesion to determine the most possible diagnosis.

Methods
REB approved.
Consent obtained.
16-year-old-female, football player, working as a waitress, leaned forward to pick up plates from a table and simultaneously looked up, immediately presented tingling and numbness over the right eyebrow, above the upper lip, cheek, chin, temple and hairline, progressing to the scalp down to the level of the occiput right side, then “shocky pain” in the distribution of C5-C6 up to the level of the right wrist, swelling of the right arm, tenderness at the shoulder, elbow and wrist. Pain at the area of the rhomboids and trapezius from T2 to T4.
All investigations were negative/normal (whole body technetium scan, right upper extremity EMG, doppler ultrasound, MRI of head, neck, chest, right brachial plexus, C1 esterase assay, quantitative immunoglobulins, T&B cell assay, alpha fetoprotein and testosterone, LFTs, P-ANCA and c-ANCA, rheumatoid factor, CT head, chest Xray, CBC, ECG, INR and PTT, and D-dimer). Evaluated by neurology, rheumatology, dermatology, physical medicine rehabilitation and adolescent medicine.
Diagnosis: CRPS Type 1.
Treatment: toradol, naproxen, acetaminophen, and gabapentin 600mg qid with suboptimal results for a month.

Chronic pain service consult: Current diagnosis didn’t follow the criteria for CRPS. On evaluation, tenderness on the lesser occipital nerve (LON) distribution and severe spasm of the elevator scapula (ES). LON block and trigger points on ES were done. Pain subsided to 2/10 for the first time.

New Diagnosis: Lesser occipital nerve entrapment and non-specific thoracic outlet syndrome (TOS).

Added treatment: Baclofen 10mg tid and morphine SR 10mg bid and morphine IR 5 mg q/once. A day later, the face, occiput, arm pain and edema disappeared.
Six months later only taking baclofen 5-10mg qhs if needed.

Discussion
TOS remains a diagnosis of exclusion and can be present with overlapping or similar clinical pictures,(1,2) as in this case with lesser occipital nerve entrapment.
TOS can occur in pediatric patients.(1,2,4) Women are 3-4 times more likely to develop neurogenic TOS.(4) Some symptoms are: paresthesias in the upper limb, pain in the neck, trapezius, shoulder and/or arm, chest, supraclavicular, occipital headache,
and parasthesias in the fingers. Compression and irritation of the upper plexus (C5, C6, C7) can cause pain in the anterior aspect of the neck from the clavicle to the mandible, ear and mastoid area, occasionally radiating into the side of the face. The anatomical anomalies are most often located in the posterior scalenic triangle.(2) Many patients report awaking at night with paresthesias.

Conclusion
CRPS Budapest criteria was developed to ensure accurate CRPS diagnosis, steps should be taken to follow this criteria.(3) Neurogenic TOS, especially ‘disputed’ neurogenic TOS, is more difficult to diagnose because there is no standard objective test to confirm clinical impressions.(2,4)

References:
References