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Cheiro-Oral syndrome due to Acute Lacunar Thalamic Infarct

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ABSTRACT

A brain infarct is a tissue death due to inadequate blood supply to the affected area. While large or massive infarcts may present with vague sensori-motor symptoms, small thalamic infarcts can present with a variety of sensory deficits that can be difficult to diagnose clinically because of their seemingly disconnected manifestations ⁽¹⁾. Cheiro-oral Syndrome is a pure sensory deficit which is confined to the perioral region and ipsilateral distal fingers ⁽²⁾. This very subtle clinical presentation might be missed in acute settings. We are reporting a case of a 46-year-old gentleman who was admitted with the complaints of right sided peri-oral numbness associated with a tingling sensation in in the fingers of his right hand.

Keywords: NIL

INTRODUCTION

The Diagnosis of Cheiro- Oral Syndrome is difficult by clinical examination alone, the involvement of perioral area and ipsilateral distal fingers gives a clue to diagnosis. We are reporting a case of a 46-year-old who was admitted with complaints of right sided perioral numbness associated with a tingling sensation in in the fingers of his right hand. Cheiro- Oral Syndrome can arise from an involvement of the spinothalamocortical and trigeminothalamocortical tract between the pons and sensory cortex. The area of involvement corresponds to the area involved in the brain(figure 1). The syndrome can also be accompanied by deficits in other cranial nerves, the ipsilateral lower extremity, and/or including ipsilateral ataxia. Often the deficits include incomplete involvement of the face or extremities, making this diagnosis easily missed in the acute setting ⁽¹⁾



Fig. 1- Various presentations of thalamic strokes ⁽³⁾

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Fig. 2- FLAIR image showing a small Infarct in the left thalamus

ON EXAMINATION:

A 46-year-old male presented with acute onset tingling sensation in his index, middle and ring fingers with right perioral numbness since one day. The symptoms were associated with vertigo. His vitals were stable on admission with blood pressure 140/ 90 mmHg and pulse 90/min. On general physical examination, the patient was conscious, alert, following commands. The neurological examination was unremarkable except for a small area of sensory loss around the lips and decreased sensations over the thumb, index, middle and ring finger. We kept in mind the differentials of a sensory seizure or a stroke involving the left somatosensory cortex in the parietal lobe as per the sensory homunculus. The etiology for seizure was suspected to be a ring enhancing lesion like Neurocysticercosis. MRI Brain was done to narrow down the differentials which to our surprise was suggestive of acute lacunar infarct in left thalamic region with few small chronic ischemic foci in supratentorial white matter (figure 2). We went on and did a full stroke work up. A CT angiogram was obtained that showed a focal stenosis in bilateral V4 segments of vertebral arteries. This explained the vertigo the patient was having. The patient was managed conservatively with hydration, dual antiplatelets and antivertigo medications. Pregabalin was given for symptomatic relief of tingling and numbness. He responded well to the given treatment

and was discharged after 72 hours with some resolution of symptoms. A week later on a follow up visit, he had a near total resolution of symptoms and was advised to continue the antiplatelet therapy.

Discussion:

Cheiro-Oral Syndrome is reported in literature as having a number of variants. including lower extremity sensory loss, ataxic hemiparesis, and oculomotor deficits ^(1,4). Our case presents with perioral numbness on the right side with tingling and numbness of fingers. Neuroimaging revealed involvement of left thalamic region with focal stenosis in bilateral vertebral artery V4 segment.

Many recent and past studies done showed involvement of the posterior limb of the internal capsule, corona radiata, thalamus and brainstem ^(5,6,7,8). Tongue involvement is often seen in some patients where lingual branch of trigeminal nerve is involved affecting $2/3^{rd}$ of the tongue. These variable clinical presentations make lacunar infarcts far less likely when sorting out an exact diagnosis. The suspicion can be concreted with a history of sudden onset of symptoms and in a setting of numerous vascular risk factors. A cardiac workup and DSA is required to achieve an exact pathology.

A small infarct or small hemorrhage was found to be the leading cause of Cheiro-Oral Syndrome while

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Volume 4, Issue 4; July-August 2021; Page No 75-77 © 2021 IJMSCR. All Rights Reserved other causes include tumor, vascular malformation, atherosclerotic stenosis, myocardial ischemia, atrial fibrillation and multiple site infarction. Our patient had a focal stenosis in bilateral vertebral artery V4 segment and management was started accordingly ⁽⁹⁾.

The location of the lesion in most cases arises from the pons, thalamus, cortex, or medullary oblongata. The spine may be the location of another possible unusual lesion seen in previous literature $^{(2,10)}$.

Since some of the infarcts are preventable, the primary goal is to manage its risk factors ⁽¹⁾. Counseling the patient about the risk factors and ways to prevent them which include smoking cessation, statin and antiplatelet therapies, exercise and stress reducing practices could further minimize its recurrence rate. A close follow-up also reduces the risk of future stroke.

Conclusion:

We demonstrate Cheiro-Oral Syndrome associated with thalamic stroke to highlight the neurological implications of this syndrome. It is of prime importance for doctors to identify the symptoms and do a full stroke workup which can prevent recurrent strokes and further complications.

Consent for publication

A Written Consent was obtained for the study.

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