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Osmotic Demyelination Syndrome: A Rare Clinical Image

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Posted Date: 5 September 2023

doi: 10.20944/preprints202309.0173.v1

Keywords: Osmotic Demyelination Syndrome (OSD); Hyponatremia; Pons; Hyperglycaemia



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Interesting image

Osmotic Demyelination Syndrome: A Rare Clinical Image

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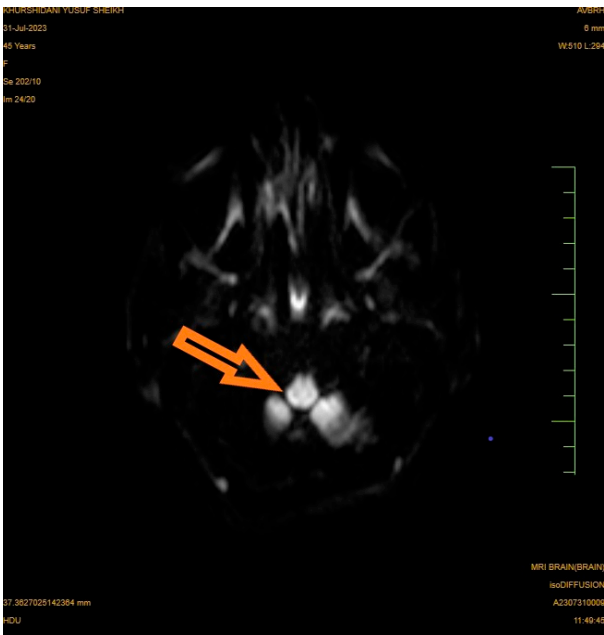
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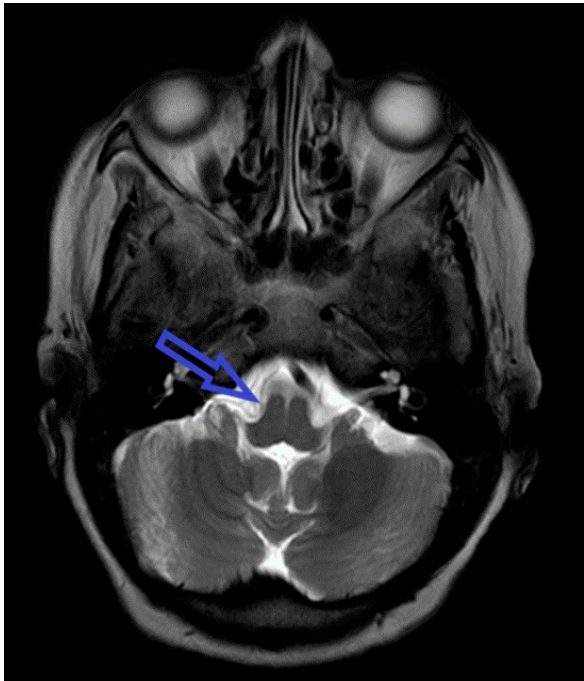
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Abstract: The term "Osmotic Demyelination Syndrome" (ODS) is synonymous with central pontine myelinolysis (CPM), denoting a condition characterized by brain damage, particularly affecting the white matter tracts of the pontine region. This damage arises due to rapid correction of metabolic imbalances, primarily cases of hyponatremia. Noteworthy triggers encompass severe burns, liver transplantations, anorexia nervosa, hyperemesis gravidarum, and hyperglycaemia, all linked to the development of CPM. Clinical manifestations encompass a spectrum of signs and symptoms, including dysphagia, dysarthria, spastic quadriparesis, pseudobulbar paralysis, ataxia, lethargy, tremors, disorientation, catatonia, and, in severe instances, locked-in syndrome and coma. A recent case involving a 45-year-old woman illustrates these complexities. Upon admission to the Medicine Intensive Care Unit, she presented with symptoms indicative of diminished responsiveness and bilateral weakness in upper and lower limbs. Of significance, the patient had a pre-existing medical history of hyperthyroidism. Extensive diagnostic investigations were undertaken, revealing compelling evidence of profound hyponatremia through blood analyses. Furthermore, magnetic resonance imaging (MRI) was performed, unveiling conspicuous areas of abnormal hyperintensity located in the central pons, intriguingly accompanied by spared peripheral regions. These radiological findings align with the characteristic pattern associated with osmotic demyelination syndrome, illuminating the underlying pathology.

Keywords: osmotic demyelination syndrome (OSD); hyponatremia; pons; hyperglycaemia



(A)



(B)



(C)



(D)

Figures. Magnetic Resonance Imaging: - (A) Hyper-intensity of central pons in diffuse weighted image (orange arrow) [1]; (B) Trident-shaped appearance (omega sign) of central pons in T2 weighted image (blue arrow) [2]; (C), (D) Piglet sign appearance of upper pons in T2 and FLAIR images (green and red circles respectively) [3].

Author Contribution: P.K. was responsible for formulating, writing, and preparing the original draft of the manuscript. All authors conducted the review and editing process as well. The final version of the manuscript was read and approved by the author.

Funding: The current study got no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Written consent was obtained from the patient's caregivers.

Conflict of Interest: The authors declare no conflict of interest.

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