

Central pontine myelinolysis

Central [pontine myelinolysis](#), is a rare [disorder](#) of [pontine white matter](#).

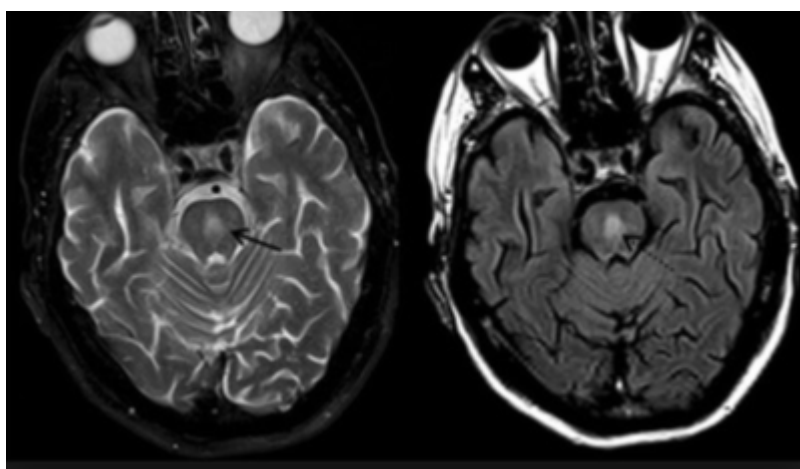
Some cases of inordinately rapid [hyponatremia treatment](#) have been associated with [osmotic demyelination syndrome](#) (which includes [central pontine myelinolysis](#) (CPM) ¹⁾ and extrapontine [myelinolysis](#), as well as other areas of cerebral [white matter](#).

First described in [alcoholism](#) ²⁾ producing insidious flaccid [quadriplegia](#), [mental status](#) changes, and [cranial nerve](#) abnormalities with a pseudobulbar palsy appearance. In one review ³⁾ no patient developed CPM when treated slowly.

And yet, the rate of correction correlates poorly with CPM; it may be that the magnitude is another critical variable ⁴⁾. Features common to patients who develop CPM are ⁵⁾

- delay in the diagnosis of hyponatremia with resultant respiratory arrest or seizure with probable hypoxemic event
- rapid correction to normo-or [hypernatremia](#)(>135mEq/L) within 48 hours of initiating therapy
- increase of serum sodium by >25 mEq/L within 48 hours of initiation of therapy
- over-correcting serum sodium in patients with hepatic encephalopathy
- NB: many patients developing CPM were victims of chronic debilitating disease, malnourishment, or alcoholism and never had hyponatremia. Many had an episode of hypoxia/anoxia ⁶⁾
- presence of hyponatremia >24 hrs prior to treatment ⁷⁾.

Diagnosis



Axial [FLAIR MRI](#).

¹⁾

Fraser CL, Arie AI. Symptomatic Hyponatremia: Management and Relation to Central Pontine Myelinolysis. Sem Neurol. 1984; 4:445-452

2)

Adams RD, Victor M, Mancall EL. Central Pontine Myelinolysis: A Hitherto Undescribed Disease Occurring in Alcoholic and Malnourished Patients. Arch Neurol Psychiatr. 1959; 81:154-172

3) 5)

Ayus JC, Krothapalli RK, Arie AI. Treatment of Symptomatic Hyponatremia and Its Relation to Brain Damage. N Engl J Med. 1987;317:1190-1195

4) 7)

Berl T. Treating Hyponatremia: What is All the Controversy About? Ann Intern Med. 1990; 113:417-419

6)

Arie AI. Hyponatremia Associated with Permanent Brain Damage. Adv Intern Med. 1987;32:325-344

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