Central PRES Mimicking Brainstem Demyelination in Chronic Kidney Disease: A Diagnostic Conundrum

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INTRODUCTION

- Posterior Reversible Encephalopathy Syndrome (PRES) generally involves the posterior regions of both cerebral hemispheres.
- However, variants do exist.
- One rare variant is a central variant involving the brainstem or basal ganglia.
- With thalamic or periventricular white matter (WM) involvement.
- Spares the cerebral cortices and subcortical WM typically involved in over 90% of patients with PRES.
- This is a rare case of a central variant of PRES in a chronic kidney disease patient with CKD.

CASE HISTORY

- 25-year-old female, a known case of chronic kidney disease (CKD stage 3A).
- Not taking proper nephrology treatment
- Presented with a history of fever with chills for 7 days.
- H/o burning micturition.
- No h/o cold, cough, rashes.
- H/o Headache for 5 days.
- Associated with ptosis, diplopia, slurring of speech, and imbalance while walking for 5 days.
- Developed altered sensorium for 2 days.

EXAMINATION

General Survey revealed pallor.
CNS Examination –

HMF- Patient was conscious but confused.

CRANIAL NERVES - Complete ophthalmoplegia, ptosis, pupils b/l dilated with sluggish reaction, **FUNDUS**- WNL

SPEECH – slurred

MOTOR:

Bulk : - WNL, TONE- all limbs diminished.

POWER- couldn't be assessed properly, moving all limbs

DEEP TENDON REFLEXES:- all absent

PLANTARS- right extensor, left- equivocal

SENSORY:- couldn't be examined properly, grossly localising pain.

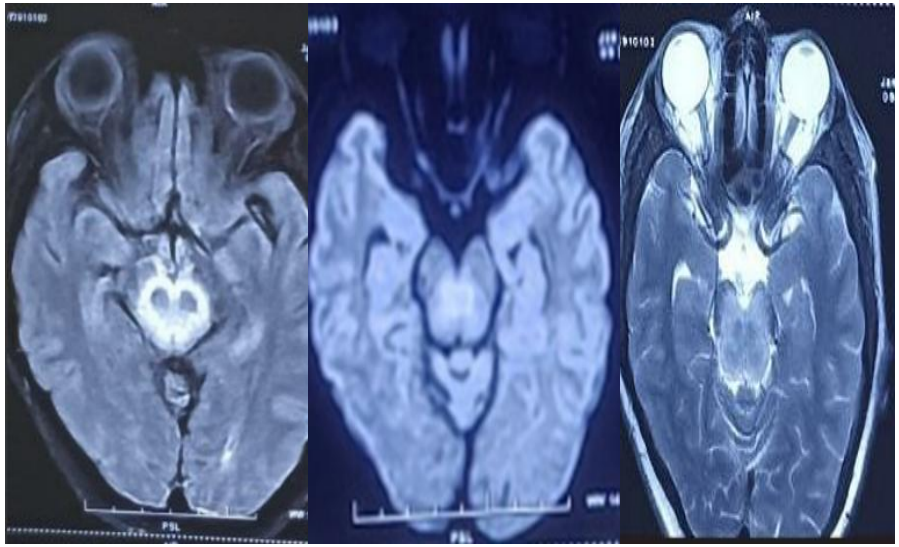
CEREBELLAR SIGNS: couldn't be examined.

EPS:- No tremors, rigidity.

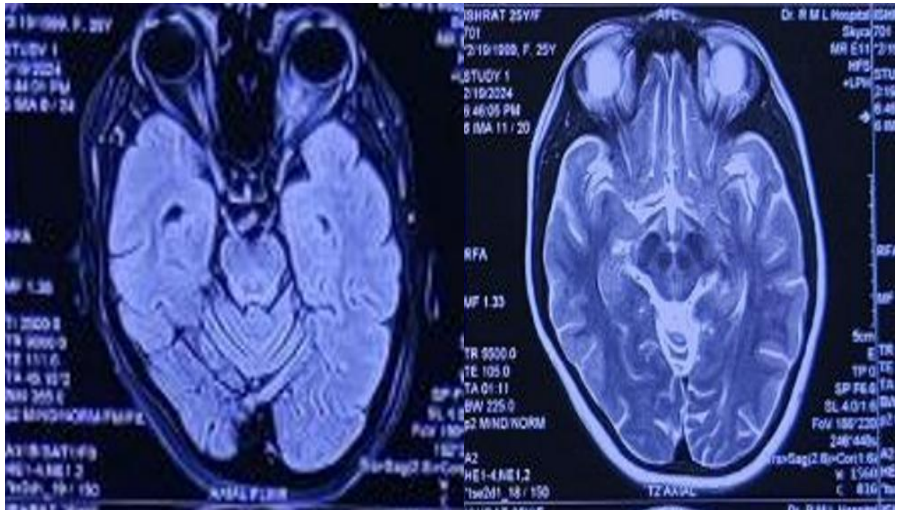
Gait- couldn't walk

INVESTIGATIONS

Hb- 9, TLC- 19,400,N87 L8 E2 M3	ESR – 26, CRP- positive
RFT (urea/creatinine/uric acid) – 193/5.73/3.5 Na/K –141/2.39/0.5/3.8	SGOT/SGPT- 29/14 Blood c/s- sterile
VASCULITIS/ANA/ENA - Negative	HIV/HBsAg/Anti HCV – non- reactive
CSF- glucose- 89.6, protein – 737, cells- 5, viral panel- negative, gram stain/culture sensitivity, KOH Mount, Cryptococcal antigen– negative.	**Serum NMO/MOG- negative** APLA- negative ANA/ENA profile – negative
Urine c/s- candida tropicalis, sensitive to fluconazole	NCS all limbs – wnl USG – w/a - b/l medical renal disease



MRI IMAGES DURING ILLNESS



MRI IMAGES AFTER RECOVERY

References-*Bartynski WS, Boardman JF. Distinct imaging patterns and lesion distribution in posterior reversible encephalopathy syndrome. AJNR Am J Neuroradiol. 2007 Aug;28(7):1320-7. 2. McKinney AM, Short J, Truwit CL, McKinney ZJ, Kozak OS, SantaCruz KS, et al. Posterior reversible encephalopathy syndrome: incidence of atypical regions of involvement and imaging findings. American Journal of Roentgenology. 2007;189(4):904–12.*

RESULTS

❑After ruling out all other causes including infections, demyelinating and other autoimmune causes, a diagnosis of central PRES was made.

❑ Following multiple sessions of haemodialysis patient improved completely.

CONCLUSION

- ❑ Central PRES due to its atypical imaging findings may present a challenge to diagnose due to similar MRI findings in numerous other conditions.
- ❑ To avoid misdiagnosis a high index of suspicion is necessary.
- ❑ Particularly in patients with risk factors such as accelerated hypertension and CKD.