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Posterior Reversible Encephalopathy Syndrome (PRES) induced by Ibuprofen intake: a case report

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PRES is a **clinicoradiological diagnosis**:

- Diverse acute/subacute **neurological symptoms**
- **Vasogenic oedema** involving the posterior subcortical regions on brain MRI (atypical brain MRI pattern in children/adolescents)
- Incidence estimated to be 0.04% of pediatric hospitalization
- **Trigger factors**: renal disease, autoimmune disease, malignancy, solid organ transplantation, stem cell transplantation, hypertension, sepsis, and **exposure to certain medications**

AIMS: no direct correlation between NSAIDs and PRES without renal impairment has been reported

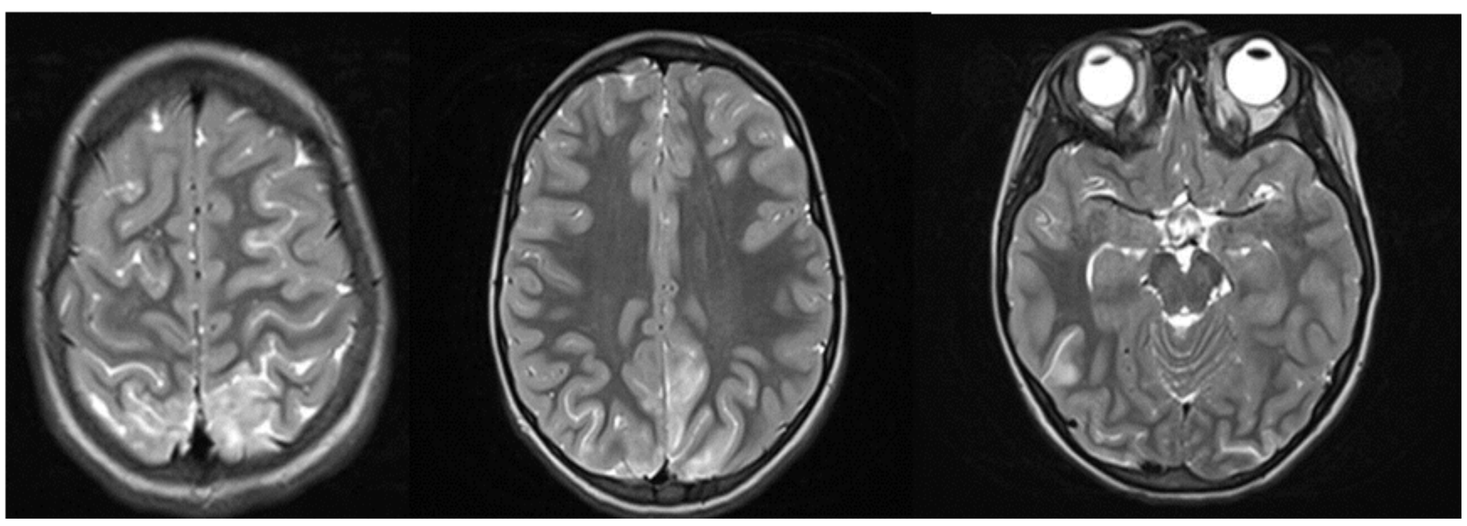

Fig.1 Axial MR image T2-weighted demonstrates extensive vasogenic edema in the occipital region bilaterally and the right parietal region

CONCLUSION

PRES can represent a side effect of nonsteroidal anti-inflammatory drug use in daily medical treatment in paediatrics. Ibuprofen-induced PRES can develop even in the absence of renal impairment, unlike most previously reported cases.

CASE PRESENTATION

❑ Patient Information

- Six years old female child
- personal and family history unremarkable
- **headache and abdominal pain, treated with five doses of ibuprofen within 24-48 hours before the onset of seizures.**
- Acute onset of a focal, prolonged epileptic seizure during sleep

❑ Clinical Findings at ED admission

- right arm weakness and slow responsiveness
- afebrile, bpm 100, blood pressure rose to 160/110 mmHg

❑ Diagnostic Assessment

- EEG: focal status epilepticus
- Brain MRI with T2-weighted (fig.1)
- **NORMAL renal function**
- Other causes of PRES were excluded.

❑ Therapeutic Intervention

- levetiracetam iv 10 mg/kg/die
- low-sodium diet and amlodipine 5 mg/die

❑ Follow-up and Outcomes

Complete clinical and radiological remission in 14 days. Blood pressure was controlled within 24 hours, and antihypertensive therapy was gradually tapered until discontinued.

Bibliography: Halbach SM, Stein D. Posterior reversible encephalopathy syndrome in children and adolescents. Curr Hypertens Rep. 2024;26(8):349-54.