Posterior reversible encephalopathy syndrome after combined spinal epidural anesthesia for intertrochanteric hip fracture repair

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Background: Posterior reversible encephalopathy syndrome (PRES) is a rare neurological disorder characterized by varied neurological symptoms, including headache, visual loss, mental abnormality, seizures and focal neurological deficits. The syndrome has been described as a post –procedural adverse effect in association with both general and spinal anesthesia.

Aim: To present the case of PRES in the PACU after hip fracture repair under spinal –epidural anesthesia.

Methods/Results:

An 85 -year-old hypertensive, ASA II male, was scheduled for intertrochanteric hip fracture surgery under combined spinal - epidural anesthesia. Intravenous midazolam 2mg was given as premedication. In the operating room standard monitoring was established revealing a blood pressure (BP) of 225/125. After intrathecal injection of 10 mg ropivacaine, BP successively dropped to 180/100 and 165/95, 90/65 then remaining stable at 125/75 throughout the remainder of the surgery.

After the 45 –minute operation, in the PACU, the patient presented with drowsiness, confusion, somnolence and diminished speech followed by vomiting and grand mal seizure 1 hour later. He was immediately transferred to High Dependency Unit (HDU) for further treatment and investigation. MRI scans showed increased fluid –attenuated inversion recovery (FLAIR) intensity in the cortical, parietal –occipital and temporal –occipital regions bilaterally, suggesting the diagnosis of PRES. The patient became responsive two days later and exited the HDU.

Summary/ Conclusions:

PRES should be considered in the differential diagnosis of patients with seizures in the postoperative period. Severe hypertension is a major predisposing factor. Most patients recover with full resolution of imaging findings and no neurological deficits.

PREVALENCE OF CLINICAL SYMPTOMS AND SIGNS

SYMPTOMS	PREVALENCE
Encephalopathy	50–80%
Seizure	60–75%
Headache	50%
Visual disturbances	33%
Focal neurological deficit	10–15%
Status epilepticus	5–15%

J Stroke Cerebrovasc Dis 2012; 21: 873–82.

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graph TD; A[Acute neurological symptom ≥1] --> B[Risk factor ≥1]; B --> C[Brain imaging]; C --> D[No alternative diagnosis]; D --> E[Posterior reversible encephalopathy syndrome];
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REGIONAL INVOLVEMENT BY PRES IN SERIES OF 136 PATIENTS

Location	% Patients
Occipital/parietal	98
Frontal lobe	68
Inferior temporal/occipital	40
Cerebellum	32
Brain stem	13
Basal ganglia	14
Deep white matter	18
Splenium corpus callosum	10

AJNR 2007;28:1302-07