

Catastrophic Postpartum Sequelae of Severe Preeclampsia with HELLP Syndrome Following Cesarean Delivery

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Background

- Preeclampsia with severe features is a hypertensive disorder of pregnancy linked to significant maternal morbidity. **HELLP syndrome** is a severe variant defined by hemolysis, elevated liver enzymes, and low platelets.
- Stroke is a major and life-threatening complication, with intracerebral hemorrhage (ICH) carrying a particularly high mortality compared to other stroke subtypes.
- Vigilance is important in the post partum period as disease progression may continue and result in multisystem failure.



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Case Report

27-year-old G1P0 at 27w0d with no PMHx presented with acute severe right-sided abdominal pain, nausea, vomiting, headache, and visual disturbances

Evaluation

Vitals
T: 98.1 F - BP: 181/111 RR: 20- SpO2: 98%
Weight: 64.05 kg (BMI 26.66 kg/m2)

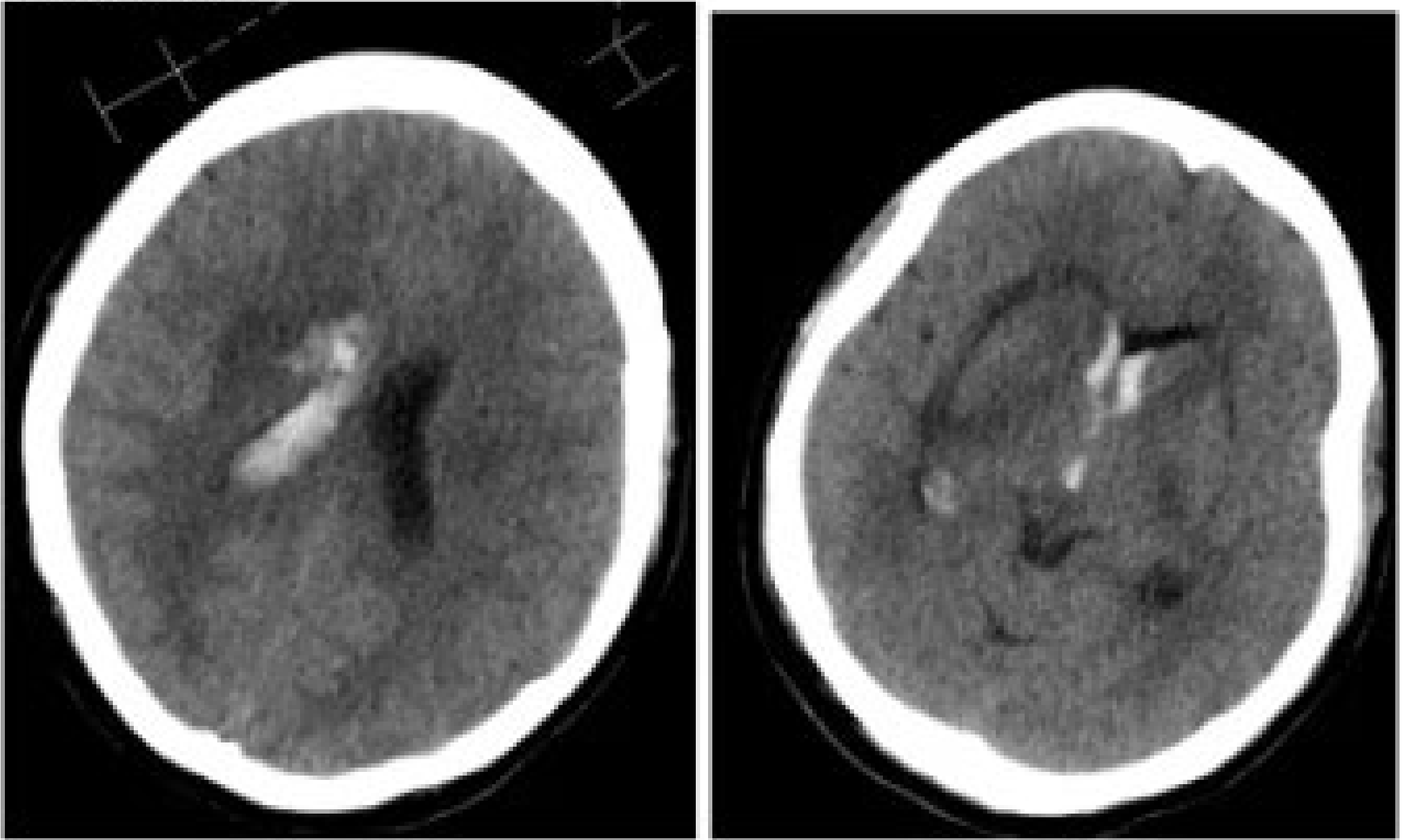
BMP				CBC		Other Labs
136	108	14	9.1	12.4		AST:505 ALT:506 UPC: 50.34
3.2	16	0.71	95	22.1	><	296
				34		

Patient remained severely hypertensive with a worsening mental status despite IV interventions; ultimately, decision made to proceed with urgent cesarean delivery under general anesthesia. Patient had no intraoperative complications.

Postpartum

Patient remained intubated given worsening mental status prior to delivery. Laboratory trends raised concern for evolving HELLP syndrome. CT imaging revealed a right basal ganglia intracranial hemorrhage with intraventricular extension and hydrocephalus.

DIAGNOSTIC DATA: 1/30/25 CT



CT Head w/o: Intraparenchymal hemorrhage centered in the right basal ganglia with extensive intraventricular hemorrhage.

		White Blood Cells		Hemoglobin	Hematocrit	Platelet
Ref.	Range & Units	3.9 - 10.7 x10(3)/mcL		11.8 - 16.0 gm/dL	36 - 43 %	135 - 371 x10(3)/mcL
01/30/25	17:22	24.9 ▲	8.7 ▼	24 ▼	66 ▼	

		Albumin Level	Bilirubin Total	Bilirubin Direct	Alkaline Phosphatase	Aspartate Aminotransferase	Alanine Aminotransferase
Ref.	Range & Units	3.5 - 5.2 gm/dL	0.2 - 1.2 mg/dL	0.0 - 0.5 mg/dL	40 - 150 unit/L	5 - 40 unit/L	0 - 55 unit/L
01/30/25	13:11	2.8 ▼	1.3 ▲	0.7 ▲	348 ▲	4,961 ▲	6,015 ▲

Results of POD1 labs obtained.

Hospital course

Following CT result, patient was transferred to neuro ICU, an external ventricular drain was placed by neurosurgery. She demonstrated steady neurologic improvement and was successfully extubated on POD3.

Severe transaminitis continued (AST/ALT peak 12,927/8,563 U/L) with imaging confirming extensive hepatic infarction, likely from HELLP-related microvascular injury.

Developed AKI with metabolic acidosis and volume overload requiring CRRT (POD4), with subsequent renal recovery allowing discontinuation by POD10; EVD removed POD8 after stable neuroimaging.

She progressed well clinically, transferred out of ICU on POD13 and to inpatient rehab on POD17; Notably, at 1-year follow-up, she had made a full recovery without residual deficits.

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Case Points

- Postpartum ≠ low risk: Delivery does not eliminate the risk of severe complications in preeclampsia/HELLP. The early postpartum period remains a high-risk window for intracerebral hemorrhage, and acute neurologic changes should prompt immediate imaging and escalation of care^{1,2}.
- Important to consider more than HELLP alone: Dramatic or persistent transaminitis after delivery should raise concern for hepatic infarction, a rare but life-threatening complication. Worsening labs or persistent abdominal pain warrant early cross-sectional imaging, even if other markers appear to improve³.
- Aggressive, multidisciplinary care changes outcomes: Even in the setting of multiorgan failure (neurologic, hepatic, renal), timely neurocritical intervention, organ support (e.g. CRRT), and coordinated care can result in full neurologic and functional recovery⁴.

References

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