Neurological Case Summary and Differential Diagnosis

# ✅ Summary of Significant Findings:

|  |  |
| --- | --- |
| Finding | Interpretation |
| CT Scan: Putaminal bleed | Confirms hypertensive ICH |
| BP = 190/110 + LVH | Chronic hypertension as etiology |
| Fixed pupil + coma + GCS 8 | Suggests mass effect with brain herniation |
| Normal coagulation, glucose, ECG | Rules out metabolic, infectious, or cardiac causes |

# Pathophysiological Interpretation of Lab and Imaging Findings

**WBC (11,000 cells/mm³):** Mild leukocytosis could be due to infection, inflammation, or stress response.

**HCT (36%):** On the lower end of normal; could suggest mild anemia.

**PLT (212,000 cells/mm³):** Normal platelet count; no immediate concerns.

**HDL (89 mg/dl):** Elevated HDL is protective against cardiovascular disease.

**LDL (45 mg/dl):** Low LDL may suggest reduced cardiovascular risk.

**Cr (1.2 mg/dl):** Upper normal; may indicate mild renal impairment.

**BUN (20 mg/dl):** Normal but high; may suggest dehydration or renal stress.

**ALP (170 u/L):** Elevated; possibly indicating liver or bone disease.

**RBS (105 mg/dl):** Normal but elevated; could suggest impaired glucose tolerance.

**CT Brain:** Hyperdense lesion in putamen and thalamus indicates hemorrhage.

**LVH with EF of 60%:** Suggests chronic hypertension with preserved cardiac function.

# MINI CASE: Cardioembolic Stroke Scenario

If the patient were a known cardiac patient and presented with left-sided body weakness, along with a PR of 150 bpm, irregularly irregular, it would raise the concern of a cardioembolic stroke, likely due to atrial fibrillation or another arrhythmia.  
  
Key considerations:  
  
1. Cardiac Risk Factors:  
 - History of arrhythmias (especially AF) increases stroke risk due to embolization.  
  
2. Clinical Presentation:  
 - Left-sided weakness = right-sided brain lesion.  
 - Irregular pulse = atrial fibrillation.  
  
3. Pathophysiology:  
 - Atrial Fibrillation leads to thrombus formation due to loss of atrial contraction.  
  
4. Management Approach:  
 - Anticoagulation (e.g., DOAC, warfarin) if ischemic stroke is suspected.  
 - Rate/rhythm control (e.g., beta blockers, calcium channel blockers).  
 - Stroke protocol with imaging and monitoring.  
  
5. Neurological Exam:  
 - Left-sided hypertonia, reflex changes, Babinski = right hemispheric lesion.  
  
Conclusion:  
This is likely a cardioembolic stroke secondary to AF requiring urgent anticoagulation, neuroimaging, and stroke management.

# Case Summary

This is a known hypertensive patient for the past 10 years who discontinued medication a year ago. She presented with loss of consciousness for 3 hours after an emotional stressor. She had fecal and urinary incontinence and a history of headache for 2 weeks.  
  
Vitals:  
- BP: 190/110 mmHg (supine)  
- PR: 108 bpm, regular  
- RR: 21 bpm, irregular and deep  
- Temp: 37.8°C  
- SaO2: 94% on room air  
  
CNS:  
- GCS: 8/15  
- Fixed, dilated left pupil  
- Right facial deviation  
- Hypertonia on left side, Babinski positive  
  
CT Brain:  
- 3x5 cm hyperdense area in putamen and thalamus  
  
Diagnosis:  
- Coma secondary to hemorrhagic stroke with left-sided facial palsy  
  
Management:  
- Coma care, NGT feeding, antihypertensives, BP monitoring, physiotherapy