

B.Sc., PHYSICIAN ASSISTANT

NEUROLOGY PUZZLE

UNIT - 3

TOPIC - BRAIN ABSCESS

TOTAL MARKS - 10 MARKS

Puzzle: Clinical Coliseum: The Hidden Intruder Arena

You are an ER neurologist on night shift when a 45-year-old man is rushed in with a 2-week history of progressive headache, low-grade fever (100.4°F), confusion, and recent onset of right-sided weakness. He has no recent travel but mentions a chronic sinus infection treated with antibiotics 3 months ago. Vital signs: BP 140/85 mmHg, HR 88 bpm, RR 16/min. Neurological exam reveals hemiparesis on the right, positive Babinski sign, and mild neck stiffness. Labs show elevated WBC (14,000/ μ L) with left shift, ESR 60 mm/hr, and normal glucose. CT head shows a ring-enhancing lesion in the left frontal lobe with surrounding edema. MRI confirms a 3 cm mass with restricted diffusion.

Options for next steps

- **Diagnosis A:** Metastatic brain tumor – Proceed to biopsy and oncology consult.
- **Diagnosis B:** Bacterial brain abscess – Initiate broad-spectrum IV antibiotics and plan surgical drainage.
- **Diagnosis C:** Viral encephalitis – Start antiviral therapy and supportive care.

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- **Diagnosis D:** Tuberculous abscess – Isolate patient and begin anti-TB regimen.

Clues to ponder:

- Ring-enhancing lesion often suggests abscess or tumor, but restricted diffusion points to pus. History of sinusitis hints at contiguous spread.
- No immunosuppression noted, but subacute progression with fever suggests infection.
- Risks: Untreated abscess can lead to herniation; surgery needed if >2.5 cm or midline shift.

What is your choice, and why? Consider etiology, complications and prognosis.

RUBRICS:

Criterion	Marks (out of 10)
Accuracy	4
Logical reasoning / Applying	3
Conceptual understanding	2
Presentation	1
Total Marks	10 marks