Cerebrospinal Fluid Interpretation

Diagnosis	Pressure (cmH_2O)	Protein (mg/dL)	Glucose (mg/dL)	Glucose-CSF:Serum Ratio	WBC/μL	Predominant Cell Type
Normal	5-20	15-40	50-80	0.5-0.8	<5	-
Bacterial Meningitis	>20	100-500	<45	<0.4	1,000-100,000	Neutrophil
Viral Meningitis	9-20	<150	>45	>0.6	100-500	Lymphocyte
Tuberculosis Meningitis	18-30	50-300	<50	<0.4	5-300	Lymphocyte
Fungal Meningitis	18-30	40-300	<50*	<0.4	40-400	Lymphocyte
Guillain-Barre Syndrome	Normal	45-1,000	40-70	-	0-5	-
Lyme Meningitis	9-20	50-100	50-75	-	10-300	Lymphocyte
Subarachnoid Hemorrhage	Normal/↑	Normal/↑	Normal/↓	-	<5	RBCs

*Cryptococcal meningitis will have CSF glucose >45

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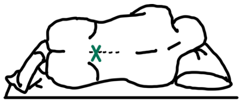
Lumbar Puncture

Head CT Prior to LP if ≥1
Age >60
Hx CNS disease
Seizure <7d ago
Immunocompromised
AMS or aphasia
Cranial nerve deficit



L4-L5 (Iliac Crests)

Time Needed to Hold AC
IV heparin (4-6h, PTT<35)
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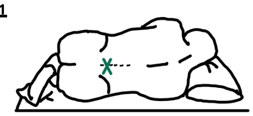
Plavix (5-7d)
DOAC (3d)
Warfarin (3d, goal INR <1.5)

Complications

	Presentation	Next Steps
Cerebral Herniation	Acute AMS, fixed pupils, hypertension, bradycardia, arrest	• Immediately replace stylet, do not drain more CSF • STAT consult neurosurgery and treat with ICP-lowering agents
Nerve Root Injury	Shooting pains during procedure	• Withdraw slightly and adjust position away from direction of pain • Consider dexamethasone if pain is persistent
Post-LP Headache	Onset 72h, lasts 3-14d	• Fluids, caffeine, and pain meds • If persistent, consult anesthesia for epidural blood patch
Spinal Hematoma	Persistent back pain or neuro symptoms	• STAT MRI IV dex + neurosurgery consult

TABLE ROUNDS



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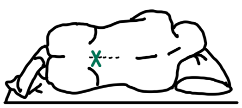

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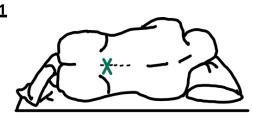

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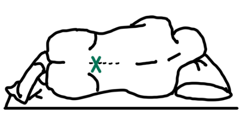

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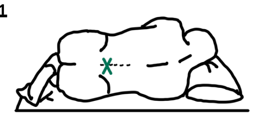

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