# Sensorineural Hearing Loss After Labor Epidural Analgesia: A Diagnostic Dilemma



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## Background

- Sensorineural hearing loss (SNHL) dysfunction of the inner ear, auditory nerve, or CNS.
- Permanent SNHL reported after dural puncture  $\rightarrow$  CSF leak +  $\downarrow$  cochlear perilymphatic pressure.

### **Timeline**

#### **Intra-Partum**

35F h/o left ICA aneurysm coiling
Uncomplicated labor epidural

#### PPD 5

Profound left-sided hearing loss, tinnitus, vertigo
Prednisone started

#### **PPD 13**

Assessed by ENT
Intra-tympanic
steroid injection

#### **PPD 14**

Trial of epidural blood patch (EBP)
No improvement

#### **PP Weeks 3 – 12**

Hyperbaric oxygen therapy
20 sessions total

#### PP Week 16

Improved hearing

Confirmed by
repeat audiogram

## **Learning Points**

- SNHL after accidental dural puncture (ADP) can be unilateral or bilateral, mild or profound, and transient or permanent. Often associated with tinnitus and vertigo.
- EBP  $\rightarrow$  diagnostic tool + treatment for SNHL after suspected ADP. Early EBP is associated with greater likelihood of full hearing recovery.

