

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

Kresimir Ukalovic MD FRCPC, William Shippam MD FRCPC, Vit Gunka MD FRCPC

## Background

### Sensorineural Hearing Loss (SNHL)

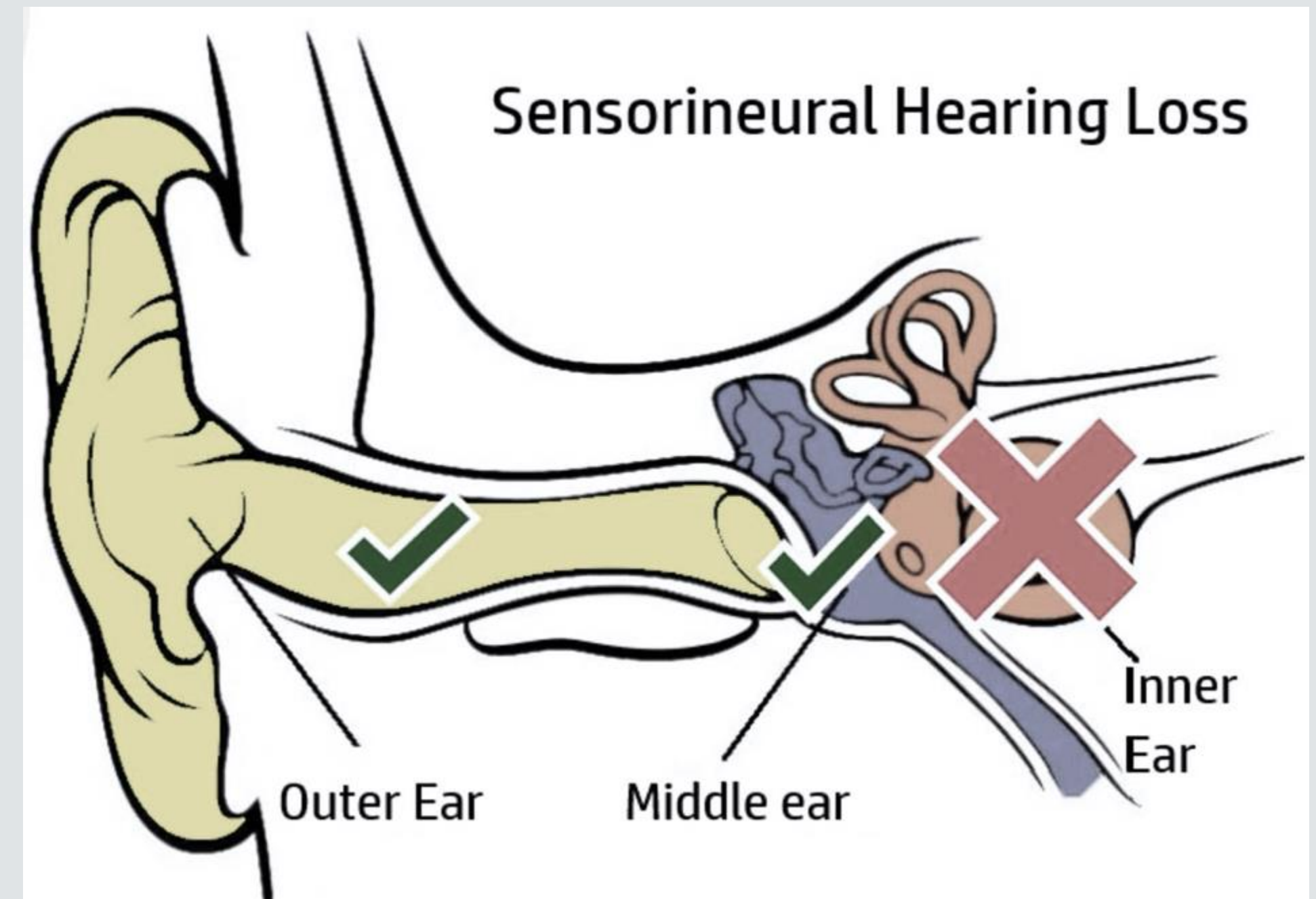
Due to dysfunction of the inner ear, auditory nerve, or central nervous system.

### Association with Neuraxial Procedures

Permanent SNHL has been reported after dural puncture, likely due to CSF leak and reduced perilymphatic pressure in the cochlea.<sup>1</sup>

### Diagnostic Challenge

SNHL can occur without other classic signs of intracranial hypotension.



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

BC WOMEN'S  
HOSPITAL+  
HEALTH CENTRE  
Provincial Health Services Authority



DEPARTMENT OF  
ANESTHESIA

Kresimir Ukalovic MD FRCPC, William Shippam MD FRCPC, Vit Gunka MD FRCPC

## 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  
No improvement

### PP Weeks 3 – 12

Hyperbaric oxygen  
therapy  
20 sessions total

### PP Week 16

Improved hearing  
Confirmed by  
repeat audiogram

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

BC WOMEN'S  
HOSPITAL+  
HEALTH CENTRE  
Provincial Health Services Authority



DEPARTMENT OF  
ANESTHESIA

Kresimir Ukalovic MD FRCPC, William Shippam MD FRCPC, Vit Gunka MD FRCPC

## Learning Points

### Variable Presentation

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 as a Treatment Option for SNHL

EBP is both a diagnostic tool and treatment option for SNHL caused by suspected ADP. Early EBP is associated with greater likelihood of full hearing recovery.

### Early Specialist Referral

If post-partum SNHL is not clearly attributed to ADP, referral to ENT is recommended to evaluate for other etiologies.