Audiological profile of Ramsay Hunt Syndrome: A Case Study

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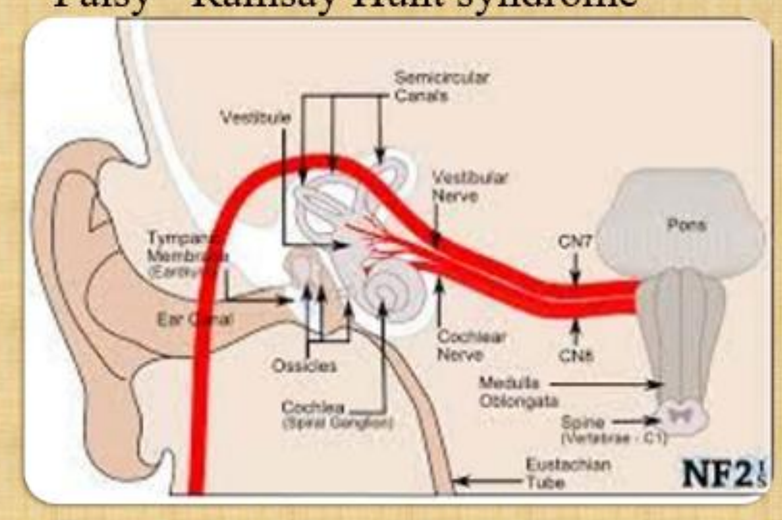
Introduction:

- Spread of **varicella-zoster virus** causes herpes zoster oticus in the ear.
- Herpes Zoster Oticus + Facial nerve Palsy= Ramsay Hunt syndrome



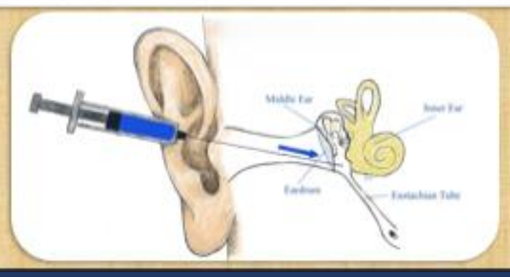
- Prevalence: 5 per 100,000
- Triad symptoms: ***Ipsilateral otalgia, facial paralysis, and vesicular rash.***
- ***Tinnitus, hearing loss, and vertigo.*** (VIII CN involvement)

Aim:

To profile the audiological characteristics of Ramsay Hunt Syndrome.

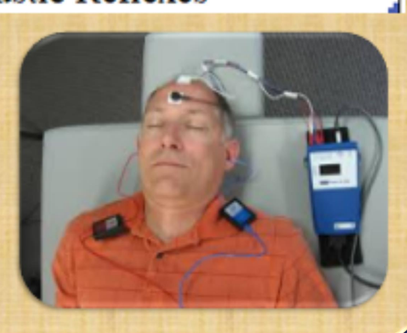
Case History:

Demographic details	Name: XYZ Age/G: 31/female
Presenting Complaint:	C/O Reduced hearing in right ear for 3-4 days K/C/O Ramsay Hunt syndrome
Difficult hearing situations:	1. Telephone 2. Noise
Ent Findings:	Mild weakness of right orbicularis oris. FN palsy (Housebrackmann Grade I) ***Otoscopy:*** R: i. Tympanic membrane, Grade 1 retraction ii. Black scabs in conchal bowl. L: Tympanic membrane intact. ***Medical management by ENT:*** i. 4 Dexamethasone intratympanic steroid injections. ii. Tab. Valacyclovir (Antiviral)
Tinnitus:	+ For 3-4 days, continuous in nature
Dizziness	+ For 2 days, 2 episodes encountered.
Ear Pain:	+ For 3-4 days
Medical history	No significant medical history



Method

Assessments:	
Subjective	**Objective**
Pure tone audiometry	Auditory brainstem response
Speech audiometry	Otoacoustic emmision
	Tympanometry
	Acoustic Reflexes



Results:

(Right ear findings)

I. Subjective assessments

	1st test (18/10)	2nd test (28/10)	3rd test (24/11)	4th test (8/12)
PTA	65	75	63.33	60
SRT	60	70	70	70
SDS	95	100	100	100
UCL	>100	>100	>100	>100

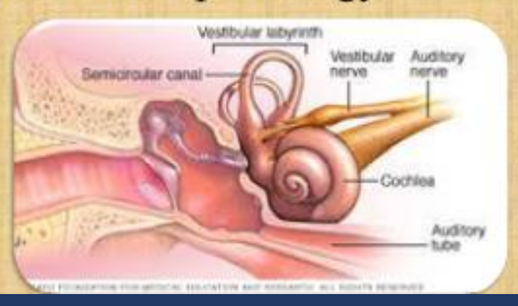
II. Objective assessments

Test	Findings
ABR	No observable peaks at 80dBnHL
OAE	TEOAE and DPOAE absent
Tympanometry	B/L 'A' type tympanogram
Acoustic reflexes	1. 28/10 – Right ipsi and contra reflexes absent 2. 8/12 – Right ipsi reflexes present contra reflexes absent

Discussion:

I. Pathophysiology in varicella zoster virus

Can cause:
1.Cochlear pathology and/or
2.Retro-cochlear pathology



II. Improvement in thresholds

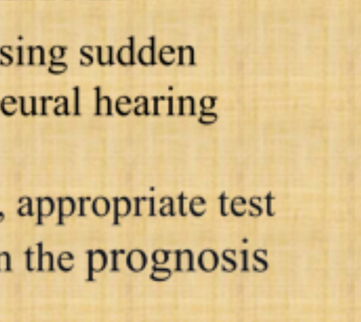
Frequency specific comparison of AC thresholds:

	1st test (18/10)	2nd test (28/10)	3rd test (24/11)	4th test (8/12)
1kHz	65	75	65	55
2kHz	70	70	65	65
4kHz	85	95	85	65
8kHz	85	80	95	65

- Average of **10dB improvement** in mid- high frequencies.

III. Acoustic reflex thresholds

- Resolving of the facial nerve palsy may have restored the acoustic reflexes.



IV. Cochlear Vs Retro-cochlear pathology

- The use of steroid therapy may have restored cochlear function.
- Vestibular function restored.

Conclusion:

- Clinical entity causing sudden unilateral sensorineural hearing loss
- Timely evaluation, appropriate test battery is crucial in the prognosis of the condition.

References:

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