Ménière’s Disease & CLAD Technology
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Freeman Health System
Outline

• Presentation
• Pathophysiology
• Diagnosis
  • Limitations
• Current Research
Ménière’s Disease

• Abnormal increase in the endolymph
  • Endolymphatic hydrops
• Symptoms:
  • (1) fluctuating hearing loss,
  • (2) episodic vertigo
  • (3) tinnitus
  • (4) aural fullness
• Progressive hearing and balance disorder.
• Pathophysiology
Pathophysiology

Distended Reissner’s Membrane

Endolympgh

Distended Basilar Membrane
Diagnosis

- Clinical
- Classifications:
  - Possible
  - Probable
  - Definite
  - Certain
- Electrocochleography
  - Specificity and Sensitivity
Diagnostic Pitfalls

- Diagnosis and treatment based on symptoms
- Lack of objective testing
- Symptoms are variable
  - Overlap
- Pathophysiology
- ECochG
ECochG and ABR

- Topographic evaluation
- First portion of the ABR
CLAD

• Background

CLAD

- Methods

CLAD

- Deconvolution
- Preliminary Data
  - 19.5 to 507 clicks/s
CLAD with Subjects

- 8 subjects
- Unilateral diagnosis definite.

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### Graph Details

- **SP Latency**
- **AP Latency**
- **AP Amplitude**
- **AP Amplitude MD**

- **Rate (Clicks/sec)**: 19, 46, 70, 123, 220, 312, 398, 512
- **Amplitude (μV)**
- **Latency (ms)**
CLAD

Amplitude (uV) vs. Latency (ms)

Rate (Clicks/sec)

- SP Latency
- SP Amplitude
Quantifying Change

Peak Delta V

AP Latency

AP Latency MD
Conclusion

- CLAD technology may be a useful tool
  - Further elucidation of clinical suspicion
  - Increased diagnostic accuracy

- Stress Test

- Risk Stratification
END

Questions?

Thank You: Dr. Larry McIntire, DO
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