

Diagnostic Accuracy of the Bedside Head Impulse Test: A Systematic Review and Meta-Analysis

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Background

- The bedside Head Impulse Test (bHIT) is a clinical test that is designed to elicit an abnormal vestibular ocular reflex (VOR) in patients with vestibular hypofunction (VH)
- The bHIT is an assessment that is quick to perform and requires no equipment
- No prior consensus has been made on the ability of the bHIT to accurately diagnose vestibular hypofunction

Purpose

Examine the current literature to determine the diagnostic accuracy of the bHIT for vestibular hypofunction

Methods



PRISMA: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines were employed to find articles for inclusion



INCLUSION CRITERIA: (1) Subjects of all ages who were suspected of having unilateral or bilateral vestibular hypofunction (2) Subjects who received bHIT as well as a comparator test



LITERATURE SEARCH: PubMed, EMBASE, CINAHL, and Scopus were utilized

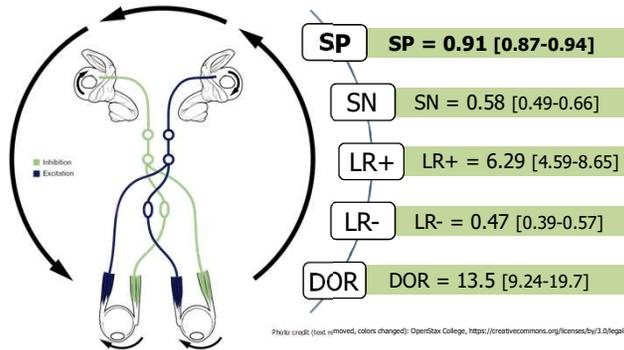


RISK OF BIAS: QUADAS 2 was performed to assess quality of studies



META-ANALYSIS: Run using a hierarchical summary receiver operating characteristic curve analysis

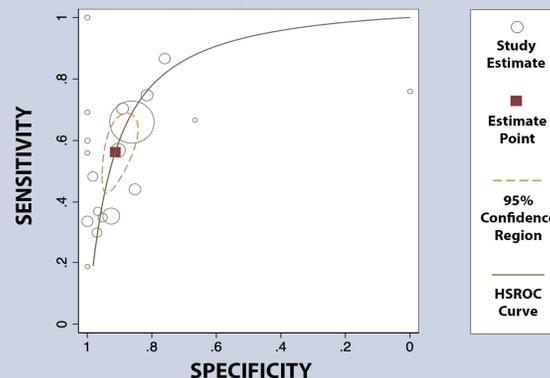
Results/Analysis



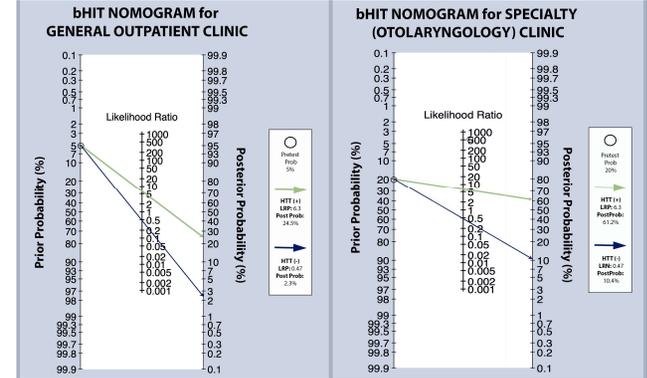
THE SYSTEMATIC REVIEW INCLUDED 26 STUDIES

THE META-ANALYSIS INCLUDED THE 23 STUDIES WITH AVAILABLE DATA (5,248 INDIVIDUALS)

HSROC SENSITIVITY/SPECIFICITY PLOT



Results/Analysis



Conclusions

- **The bHIT has good ability to rule in VH with high specificity and reasonable positive likelihood ratio**
- The bHIT has poor ability to rule out VH with low sensitivity and low negative likelihood ratio

Clinical Relevance

- ✓ A positive bHIT will raise the possibility of vestibular hypofunction by about 15% in a general outpatient clinic where baseline prevalence is low
- ✓ A positive bHIT will raise the possibility of vestibular hypofunction by about 40% in a specialty otolaryngology clinic where baseline prevalence is higher
- ✓ **Overall a positive bHIT can help rule in vestibular hypofunction.**

Acknowledgements / References

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More references available upon request
Link to full article by scanning QR code

