

Diagnostic Accuracy of Subjective Features & Physical Examination Tests for Morton's Neuroma: A Systematic Review

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Theme – Evolving Practice

Background

Morton's neuroma is a common pathology with many reported subjective features and physical examination tests.

Objective

To examine the diagnostic accuracy of subjective features and physical examination tests for Morton's neuroma.

Methodology

A comprehensive systematic review was undertaken. QUADAS-2 was used to assess risk of bias.

Data sources

CINAHL, CENTRAL, EMBASE, MEDLINE, PubMed, OpenGrey, PEDro, PsycINFO, Scopus and Trials register were searched from inception to January 2021.

Inclusion criteria

- Prospective or retrospective cohort studies
- Participants aged 18 or over with suspected Morton's neuroma
- Primary data allowing construction of 2-by-2 diagnostic tables or reported sensitivity and specificity figures
- Diagnosis of Morton's neuroma using MRI, ultrasound, surgery, positive response to steroid and/or anaesthetic injection
- In English or translatable

- Subjective "clicking" reported by a patient rules in Morton's neuroma.
- Modified webspase tenderness test rules out Morton's neuroma when negative.

Results

- The search yielded 1170 results, 9 were included in this systematic review as illustrated in the PRISMA flow diagram (Figure 1). Refer to the references for details.
- Subjective clicking was highly specific (0.96, 95% Confidence Interval [CI] 0.79-0.99) and had a high positive likelihood ratio (13.14, 95% CI 1.74-99.2)
- The modified webspase tenderness physical examination test was highly sensitive (0.96, 95% CI 0.87-0.99) with a low negative likelihood ratio (0.04, 95% CI 0.01-0.15)
- Only one study had low risk of bias

Limitations

Specificity values, likelihood ratios and predictive values could not be accurately calculated in several studies.

Conclusion

When a patient reports subjective clicking, it strongly suggests the presence of Morton's neuroma. Conversely, a negative result on the modified webspase tenderness test reliably excludes Morton's neuroma.

References

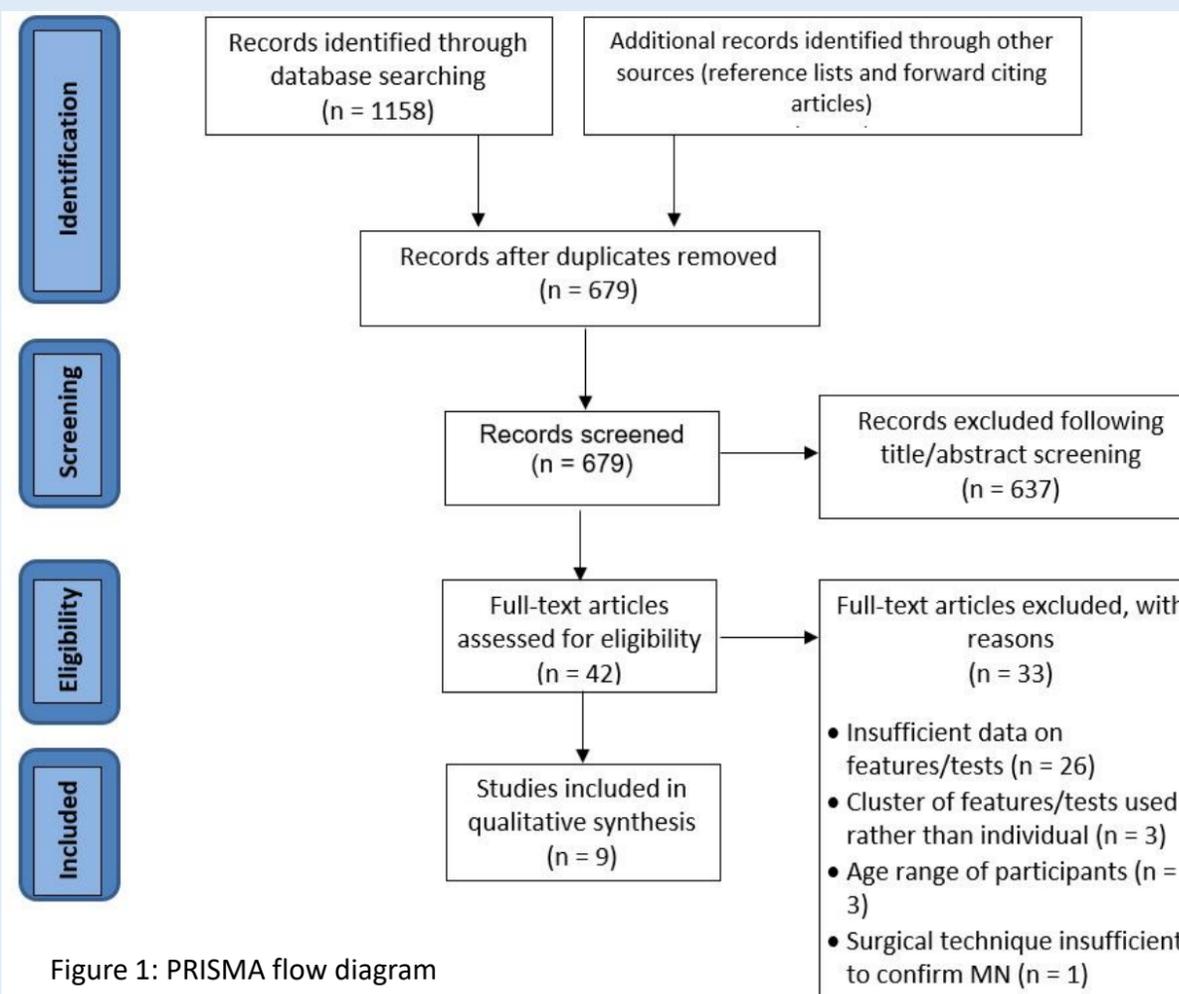


Figure 1: PRISMA flow diagram