

Performance of syndromic management for genital ulcer disease: a systematic review and meta-analysis

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Background:

Syndromic management of genital ulcer disease (GUD) is used when there is lack of access to appropriate diagnostics. We aimed to determine the performance of syndromic management of GUD.

Methods:

We conducted a systematic review (Prospero: CRD42020153294) using eight databases for publications up to September 2019 that reported primary data of syndromic management of GUD. Titles and abstracts were independently assessed for eligibility, and data were extracted from full texts for the following: sensitivity/specificity, acceptability and feasibility of implementation. We used a hierarchical logistic regression model to report the pooled sensitivity and specificity.

Results:

Of 14,190 articles, 151 full-texts were examined and 68 included in the analysis. We identified two types of papers: 1) Performance of a presumptive clinical diagnosis of a pathogen; and 2) Performance of GUD to detect a pathogen. The pooled sensitivity was 40.4% (95% CI:23.0-60.6), and pooled specificity was 88.0% (95% CI:75.3-94.6) for a clinical diagnosis to detect herpes ($n=15$). The pooled sensitivity was 42.2% (95% CI:10.9-81.3), and pooled specificity was 91.0% (95% CI:65.9-98.1) for GUD to detect herpes ($n=7$). The pooled sensitivity was 64.4% (95% CI:44.8-80.2), and pooled specificity was 83.7% (95% CI:67.0-92.9) for a clinical diagnosis to detect syphilis ($n=15$). The pooled sensitivity was 20.0% (95% CI:7.0-45.3), and pooled specificity was 92.6% (95% CI:81.6-97.2) for GUD to detect syphilis ($n=12$). There was mixed evidence for the acceptability/feasibility of implementing syndromic management for GUD.

Conclusion:

Neither the presumptive clinical diagnosis nor presence of GUD provided satisfactory detection of herpes or syphilis: the poor sensitivity result in significant numbers of missed cases. On the other hand, offering treatment for both herpes and syphilis to all individuals with GUD could avoid missing cases, but will lead to over-treatment. There is an urgent need to improve access to affordable diagnostics for GUD to guide appropriate management.

Disclosure of Interest Statement:

All authors declare they do not have any conflict of interest.