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MODIFIED FAINE'S CRITERIA; A USEFUL DIAGNOSTIC TOOL IN RESOURCE POOR SETTINGS

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Background: Diagnosis of leptospirosis remains as a clinician's dilemma despite the introduction of various new diagnostic methods. Additionally, specialized diagnostic facilities are not ubiquitous. Thus, reliable and affordable diagnostic criteria are important in resource poor settings. The aim of this study is to determine utility of modified Faine's criteria in diagnosing leptospirosis clinical cases.

Methods: Serum from 168 clinically suspected leptospirosis patients (on 5th day of infection) were used for immunochromatographic assay (Leptocheck WB, India), microscopic agglutination test (MAT) and polymerase chain reaction (PCR). Modified Faine's criteria (with amendment) 2012 was applied and a score was given considering clinical, epidemiological and laboratory data (Kumar, 2012). Three laboratory diagnostic criteria were compared; MAT titre $\geq 1:400$ &/ or PCR, MAT titre $\geq 1:800$ &/ or PCR, and rapid immunochromatographic assay. A score of ≥ 25 was considered as positive for leptospirosis. A single MAT titre $\geq 1:400$ and a positive PCR were used as the bench mark for confirmation (WHO, 2011). Performance of Modified Faine's criteria was evaluated against the WHO standard.

Results: Leptospirosis was confirmed in 39% using WHO criteria. Among the three laboratory criteria, modified Faine's criteria (MAT $\geq 1:400$ &/ or PCR) showed 95.45 % sensitivity, 56.86 % specificity, 58.88 % positive predictive value and 95.08% negative predictive value. Respective values of modified Faine's criteria with rapid immunochromatographic assay were 89.39 %, 58.82 %, 58.42 % and 89.55 %.

Conclusions: The modified Faine's criteria with immunochromatographic assay is a reliable bedside diagnostic tool hence it can be readily used to detect leptospirosis in resource poor settings.

References

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