

ABSTRACT

TITLE: Diagnostic performance of dry eye tests in primary Sjogren's syndrome patients in Indian setting

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OBJECTIVE: To evaluate the diagnostic performance of Schirmer I test(Sch I), Tear break-up time (TBUT) and Ocular staining score(OSS) in Primary Sjogren's syndrome patients in an Indian setting.

METHODS: A cross sectional study done in Ophthalmology Department, on 95 patients clinically suspected of having pSS with their immunology and serology reports awaited for confirmatory diagnosis as per American college of Rheumatology (ACR) criteria referred from Rheumatology Department for evaluation. The severity of their ocular symptoms were assessed with Ocular surface disease index (OSDI) questionnaire. Dry eye tests like Sch-I, TBUT test and OSS were done. Data obtained were evaluated statistically and then sensitivity, specificity, positive likelihood ratio (+LR) and Receiver operating characteristics (ROC) curve were analysed for each test.

RESULT: Most patients were female and common complaints were itching and foreign body sensation. Anti SSA (sensitivity:76.7 % specificity:88.7%) was better than anti SSB in diagnosing pSS. There was a good association of disease with labial biopsy (sensitivity:96.8%, specificity:88.9%,+LR :8.72).The cut off value obtained is Schirmer I \leq 15 (sensitivity:64.5% and specificity 85.9%,+LR:5.7), TBUT \leq 8 secs (sensitivity:80.6% and specificity 60.9%, +LR: 2.06)

and OSS ≥ 3 (sensitivity: 90.6%, specificity: 61.3%,+LR :2.34).A positive correlation seen between OSDI and Schirmer I, TBUT and OSS (p: 0.001, 0.001 and 0.005 respectively).

CONCLUSION: Our data suggest good likelihood of diagnosing pSS with anti SSA,though biopsy still holds the stronger association(+LR: 8.72). The cut off value of Schirmer I ≤ 5 mm/mins and TBUT ≤ 10 secs has increased risk of giving false negative results and decreasing the clinical importance. Therefore cut off value of Schirmer I ≤ 15 mm/5mins, TBUT ≤ 8 secs and OSS score ≥ 3 may offer better diagnostic yield for diagnosing pSS in Indian population. There is good correlation between dry eye symptoms and tests.

KEY WORDS : Primary Sjogren's Syndrome, Dry Eye tests, ACR Criteria.