



Discriminating Causes By Dry Eye Diagnostic Tests

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ABSTRACT

Purpose: Dry Eye Disease (DED) is part of several conditions, including Sjögren's syndrome (SS) and no single test to diagnosis DED. The present study intends to evaluate whether a set of signs and symptoms of DED can distinguish: a) SS from other non-overlapping systemic diseases related to DED; b) primary and secondary SS.

Methods: 182 consecutive patients with DED were evaluated under five groups: SS, graft-versus-host disease (GVHD), Graves' orbitopathy (GO), diabetes mellitus (DM), glaucoma under treatment with benzalkonium chloride medications (BAK). Twenty-four healthy subjects were included as control group (CG). The evaluation consisted of Ocular Surface Disease Index (OSDI), Schirmer test (ST), corneal fluorescein staining (CFS) and tear film break up time (TFBUT). Indeed, a subset of DED patients (n=130), classified as SS1, SS2 and nonSS (NSS) by the American-European Criteria were compared. Quadratic discriminant analysis (QDA) classified the individuals based on variables collected. The area under Receiver Operating Characteristics (ROC) curve evaluated the classification performance in both comparisons.

Results: Comparing SS with other diseases, QDA showed that the most important variable for classification was OSDI, followed by TFBUT and CFS. Combined, these variables were able to correctly classify 62.6% of subjects in their actual group. At the discretion of the area under the ROC curve, the group with better classification was the control (97.2%), followed by DM (95.5%) and SS (92.5%). DED tests were different among the NSS, SS1 and SS2 groups. The analysis revealed that the combined tests correctly classified 54.6% of the patients in their groups. The area under the ROC curve better classified NSS (79.5%), followed by SS2 (74.4%) and SS1 (69.4%).

Conclusions: Diseases that causes DED, and also SS1, SS2 and NSS are distinguishable conditions, however a single ocular tools was not able to detect the differences among the respective groups.



Data Sjogren
Discriminant.xlsx

PROTOCOL STATUS

Working

We use this protocol in our group and it is working



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