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| DEW | DRY EYE: DIAGNOSTIC TEST TEMPLATE | |
| RAPPORTEUR | A.J.Bron | 19 th Oct 2004 |
| TEST | Schirmer-1 Test – without anaesthesia | |
| TO DIAGNOSE | Sicca syndrome | REFERENCES |
| VERSION | [V1] | |
| DESCRIPTION | An estimation of tear flow stimulated reflexly by insertion of a filter paper into the conjunctival sac. | |
| NATURE of STUDY | Diagnostic value of the Schirmer 1 test, Rose bengal staining and a test of lysozyme tear level in sicca syndrome. Normal controls: 550 Age 20-74 years M=F in each 5 y band Sicca syndrome: 43 F32; M11 | |
| CONDUCT of TEST | Schirmer 1 test: The unanaesthetised eye Schirmer paper strips Schirmer strips inserted over the lower lid margin, midway between the middle and outer third (assumed). Closed eye (assumed). Read at 5 minutes [No further details] | van Bijsterveld 1969 |
| RESULTS of STUDY | Schirmer -1: With a cut of ≤ 5.5 mm the probability of misclassification of patients was 15% and of controls was 17%. No significant differences between men and women at each 5 year age band, but Schirmer value fell with age. Note 107 controls had wetting > 30 mm | |
| Web Video | Not available | |
| Materials: | <ul style="list-style-type: none"> Schirmer Papers (5x35mm Whatman No 1) | |
| Standardization | Time of day [√] Temperature [√] Humidity [√] Air speed [√] Illumination [√]. Assumed to influence. | |
| Variations of technique | <ul style="list-style-type: none"> Calibrated and dyed papers (Eagle Vision - blue) Paper housed in impervious wrap, to reduce evaporation. | Esquivel and Holly |
| Value | - | |
| Repeatability | Intra-observer agreement. [-] Inter-observer agreement. [-] | |
| Sensitivity | Differentiating ‘sicca’ from normals: (true positives) [85%] ≤ 5.5 mm cut off | van Bijsterveld 1969 |
| Specificity | (100 – false positives) [83%] ≤ 5.5 mm cut off | van Bijsterveld 1969 |
| Test problems | Full details of Schirmer not stated in this paper. Two eye data was pooled for analysis, for all measures (ie. Including rose bengal and lysozyme | |
| Glossary | ‘sicca’ = keratoconjunctivitis sicca = dry eye. In this study it probably equates with aqueous-deficient dry eye. | |

References

Holly FJ, Esquivel ED. Lacrimation kinetics as determined by a novel technique, in Holly FJ (ed). *The preocular tear film*. Lubbock TX, Lubbock Dry Eye Institute, 1986

van Bijsterveld OP. (1969). Diagnostic tests in the sicca syndrome. *Arch Ophthalmol*. 82: 10-14.