Behavioral and Potential Clinical Indicators for Dry Eye Disease: Preliminary Findings
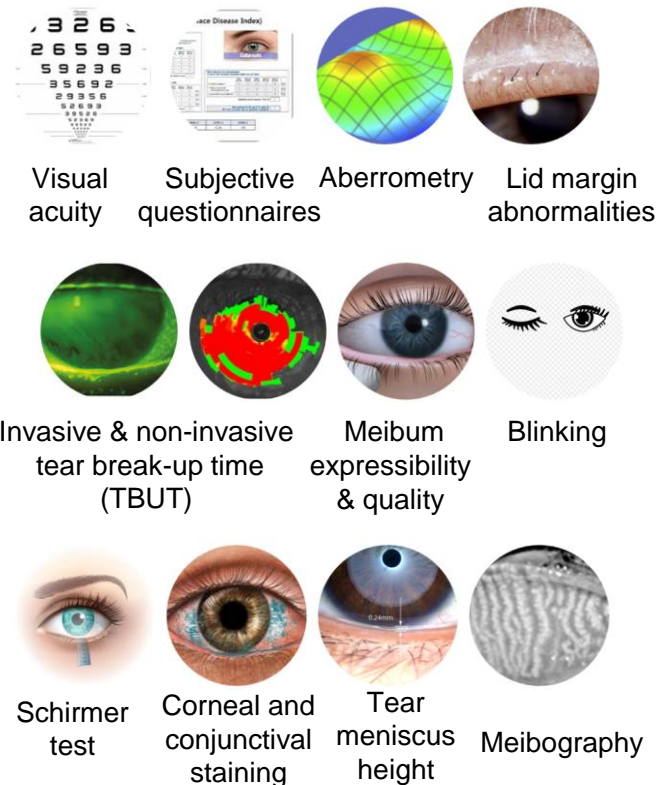
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Purpose

Dry eye disease (DED) is a widespread eye condition affecting millions globally. This study aimed to identify behavioral and clinical measures that may predict individuals at risk of developing dry eye, enabling early intervention.

Methods

Visual acuity

Subjective questionnaires

Aberrometry

Lid margin abnormalities

Invasive & non-invasive tear break-up time (TBUT)

Meibum expressibility & quality

Blinking

Schirmer test

Corneal and conjunctival staining

Tear meniscus height

Meibography

Dry eye:
Ocular surface disease index (OSDI) ≥ 13 and TBUT<10 sec
Meibomian gland dysfunction (MGD):
Dry eye and MG loss>25%
(Tear Film and Ocular Surface Society)

Spearman Test
Mann-Whitney U Test

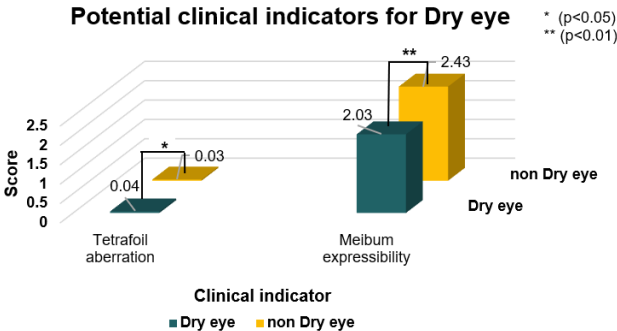reutif@jmc.ac.il

Conclusions

Tetrafoil aberration and meibum expressibility emerged as **potential clinical indicators for dry eye.**

Tetrafoil aberration, lid abnormalities score, meibum expressibility, corneal staining, and blinks per minute emerged as **potential clinical indicators for MGD.**

Results

	All participants	Dry eye	MGD
N (%)	66 (100%)	31 (47%)	17 (26%)
Mean age± SD (years)	22±3	22±2	22±3
Range	18-31	19-27	19-27
Mean OSDI questionnaire Score (0-100)	17.54±16.47	30.43±14.38	30.15±15.97
Mean MGD questionnaire Score (0-11)	2.70±2.20	4.00±2.03 (non Dry eye: 1.54±1.65, P<0.001)	4.18±2.07 (non MGD: 2.18±2.03, p=0.001)

Potential clinical indicators for Dry eye

* (p<0.05)
** (p<0.01)

Potential clinical indicators for MGD