Contact Lens Update
CLINICAL INSIGHTS BASED IN CURRENT RESEARCH

Summary: Diagnostic methodology report

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Wolffsohn JS, Arita R, et al. TFOS DEWS II Diagnostic Methodology report. Ocul Surf 2017; 15(3): 539-74.

The *Diagnostic Methodology* report highlighted the importance of separating the symptoms associated with dry eye disease from symptoms that arise due to other conditions, where dry eye disease may be a comorbidity. The use of triaging questions prior to any other dry eye assessments can differentiate the conditions that mimic dry eye disease to ensure appropriate diagnosis and optimal treatment.

One key addition to the definition of dry eye in DEWS II includes reference to ocular surface homeostasis. The relevant tests for determining this lack of homeostasis identified in this report are:

- Non-invasive tear break up time
- Tear osmolarity
- Ocular surface staining

These homeostasis markers are crucial in the battery of tests for dry eye disease diagnosis. Symptoms (assessed using a dry eye questionnaire) and the presence of at least one positive result of these three markers should constitute a diagnosis of dry eye disease. However, clinicians do not have to conduct all of these tests in order to make a diagnosis. The recommended order of administering the tests in clinical practice should be from the least invasive first, with the most invasive test last:

1. Dry eye symptoms should be assessed using a validated symptom questionnaire (e.g. DEQ-5 or OSDI) that is administered before any other assessments are made. Validated questionnaires are also useful in monitoring the progression of dry eye disease and the response to treatments.
2. Objective assessment of non-invasive tear break up time is preferred. If non-invasive techniques are not available, tear break-up time can be assessed with fluorescein, but this should be scheduled after tear osmolarity measurements have been taken.
3. Tear osmolarity assessment (≥ 308mOsm/L or an interocular difference >8 mOsm/L).
4. Ocular surface staining (assessing conjunctival and lid margin damage, in addition to corneal damage).

Further tests can be conducted to determine the sub-classification of dry eye disease and better tailor a treatment plan. These tests may include assessments for meibomian gland dysfunction, lipid layer analysis and

measurements of tear volume.

REFERENCES

Wolffsohn JS, Arita R, et al. TFOS DEWS II Diagnostic Methodology report. *Ocul Surf* 2017; 15(3): 539-74.