Lessons from abroad: Lid parallel conjunctival folds
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As an eye care practitioner in the United States, you are surely able to name at least five different dry eye tests, but I doubt that Lid Parallel Conjunctival Folds (LIPCOF) would be on your list. While we have a plethora of dry eye diagnostic techniques, few tests are able to make a diagnosis of dry eye as well as LIPCOF (75.95 percent negative predictive value/positive predictive value 93.09 percent).\(^1\) LIPCOF is graded by using a slit-lamp biomicroscope (16-25x magnification) or an optical coherence tomographer to examine the bulbar conjunctival folds that are parallel to the tear prism and directly below the most temporal and/or nasal aspects of the limbus (Figure 1).\(^2\)\(^-\)\(^4\)

There are a number of LIPCOF grading scale variations in the literature; however, Hoh et al’s original scale is the basis for all of them:\(^1\) below is an optimized scale commonly used today.\(^5\)

- Grade 0: No conjunctival folds or disrupted micro-folds in one line
- Grade 1: One permanent parallel fold or with disrupted micro-folds
- Grade 2: Two permanent parallel folds less than 0.2mm or with disrupted micro-folds above
- Grade 3: More than two permanent parallel folds greater than 0.2mm or with disrupted micro-folds above

Qualifying LIPCOFs must disappear when the examiner pulls the lower eyelid away from the eye, and they must return to their original position after a few blinks.\(^6\) The underlying cause for this finding is still unknown, though it has been hypothesized that the folds result from mechanical friction that is secondary to mucin deficiency.\(^4\)\(^,\)\(^5\) Overall, the ease of LIPCOF assessment and its promise to be able to predict which new contact lens wearers will develop dry eye makes it a particularly attractive assessment, and I expect that it will continue to gain popularity here as it has abroad.\(^5\)

References:

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