Tracking Tear Osmolarity Numbers from Visit to Visit and the Importance of This Information for Our Patients

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An isolated test result may be helpful but, for the treatment of a chronic condition such as Dry Eye Disease, one needs to review the sequence of test results over time. It is by seeing a trend that one can assess the success of an implemented treatment plan for the patient.

If there is a sudden rise in a patient's tear osmolarity number after multiple visits of rather stable osmolarity outcomes, I bring this abnormal result to the patient's attention and ask if any new changes have occurred in their environment or life and ask very specific questions such as:

Have you just turned the air conditioning on? Are the AC vents blowing into your eyes in the car or at work?

Have you just turned the heat on? Are the heat vents blowing into your eyes in the car or at work?

Have you just turned a fan on above your bed or have you just started to use a fan near your face while sleeping or at work?

Have you just started to use a diuretic or was your diuretic recently increased by your primary physician?

Have you just started to use or increased the use of systemic anti-allergy medications?

Have you just started to use or increased the use of topical ophthalmic anti-allergy drops?

Have you just started any new medication that can cause dry eyes or the worsening of dry eye symptoms?

Often, it is like a light bulb going off when the patient correlates an environmental change with the worsening of their dry eye symptoms. All of a sudden, they 'get it' and see how one of their actions now affects their dry eyes. Then, the patient is able to associate these acts with the changes in his/her tear osmolarity numbers. Patients greatly appreciate me helping them connect the dots.