This week's topic: MANAGEMENT OF DRY EYE

As I mentioned in my previous post, the three basic legs of therapy for Sjogren's syndrome are:

a) topical therapy of dry mucosal surfaces;

b) prevention and treatment of extraglandular manifestations; and

c) approaches to fibromyalgia in the patient with sicca symptoms.

In the coming weeks, I invite you to review and critique my approach to each of these topics. Also, please add your suggestions, so that we can all arrive at more efficient ways to educate our patients and ourselves.

This week I would like to share our basic approach at Scripps Memorial in the treatment of dry eyes, and solicit your opinion and discussion.

To put this problem in perspective, a fairly recent study found that patients equated the impact of their dry effects on their "quality of life" at the level of moderate angina and the impact on their quality of work (especially those using computers) at the 40% functional impairment level.

This week we will start with choice of artificial tears, ointment and gels, and recognition of environments that exacerbate dry eye conditions.

As a rheumatologist, I do not attempt to replace the ophthalmologist and emphasize that treatment of dry eyes requires a partnership between patients, ophthalmologists, rheumatologists and other health care professions.

I appreciate the help in preparing this blog post from Dr. Paul Michelson, our former Head of Ophthalmology, who has now limited his practice to teaching, consulting and providing eye care to underserved areas of the US and other parts of the world.

We have also prepared 3 tables that list several available artificial tears with preservatives (Table 1); artificial tears without preservatives (Table 2); the basic components of artificial tears to help in evaluating generic brands of artificial tears (Table 3) and suggestions for the initiationn of therapy with artificial tears, gels or ointments (Table 4). These tables are available on my web site (www.robertfoxmd.com) in the folder titled "Blog Tables," and all readers are invited to download them and offer suggestions for improving them.

Rheumatologists start by telling the patient to go to the local pharmacy or grocery store and pick up a selection of artificial tears to try. However,

upon following my own suggestion, I was struck by the bewildering array of choices that confront the patient in the “eye drop” aisle (show photograph).

In addition to the wide variety of brands available, many of artificial tears with the “same name” come in “mild,” “moderate,” and "severe" formulations—terms that refer to the relative viscosity of each preparation. A literature search reveals relatively few crossover studies that compare different artificial tear preparations, and most of these trials are short-term trials. (1, 2, 3, 4)

It is sometimes unclear whether patients need to switch to another type of artificial tear formula or should stay in a single brand of artificial tear (going from “mild” to “moderate” or “severe” preparation of the same tear) or whether they should change to a different type of polymer or a preservative- free tear.

There does seem to be agreement that artificial tears containing preservatives should not be used more than 4 times a day); preserved tear products containing substances that can lead to ocular surface epithelial toxicity.

It should also be recognized that even if we use preservative-free artificial tears in our dry eye patients, patients may still be receiving other eye drops (such as treatment for glaucoma or infection) that may contain ~~a~~ preservative. Thus, we have to consider the entire cumulative effect of preservatives on the eye.

Some general guidelines are included in Table 4 that accompanies this blog (the tables are presented on my website at robertfoxmd.com). We generally tell patients that treatment is a trade-off between preserved tears (which are cheaper) and non-preserved tears (that can be used more frequently, as they lack preservative). Another trade-off is the “viscosity of the tear” that makes it last longer but may lead to transient blurred vision.

The patient must be prepared to “mix” and “match” their environment with the frequency and type of tear. In this spirit, we often suggest that initial collection of artificial tears might include; Refresh®, Systane®, Tears Naturale and Hypotears®. Often, generic versions of these tears are available, and we have suggested that the patient carefully compare the contents of the generics (they can use guidelines listed in Table 3.

An additional point is that night-time use of gels and ointments may prove very helpful, so that the patient does not arise in the morning with a

severely diminished tear film. Gels may not be as effective as ointments, but the latter produces less blurring and dissipates faster. However, some people do not tolerate gels, perhaps due to the preservatives. We often suggest an initial trial of Refresh PM® (ointment), GenTeal® gel (may have preservative), or Lacrilube® (ointment).

It is important not to overuse the gels or ointments, as they may leave a residue on the lower lashes. A small amount (such as 1/8 inch or less) should be used.

As a rheumatologist, I have limited time for discussion of dry eye therapy with the patient, but recognize that the patient, after multiple "visits" to an array of "dry eye websites" may be suffering from "information overload". Thus, I propose the following approach to effectively provide instructions on dry eye syndrome:

- *While I am in the exam room with the patient, I have a laptop handy and on-the-spot email them a copy of written instruction sheet on dry eye treatment, including the Tables listed on my website. (For individuals who do not have a computer, public libraries offer access to a free email account.)*
- *I ask them to read the instruction sheet, share the information with concerned relatives, and note their questions for their next visit.*

As I gather feedback on this blog, I expect to revise the Tables and the Instructions (which are available on my site) to include others' insights.

Therapy of dry eye (or "lacrimal keratoconjunctivits sicca"-- KCS) in Sjogren's requires a multi-pronged approach aimed at:

• eliminating exacerbating factors,

• supporting tear producing glands,

• hydrating the ocular surface,

• restoring normal tear film osmolarity,

• stabilizing the tear film, and

• inhibiting the production of inflammatory mediators and proteases.

But successful treatment with artificial tears is a lot more than just "add water (and stir)." We frequently refer our patients to an informative website called www.TheDryEyeZone.com. We also want to hear about your discoveries of resources.

In summary, there is a generally high level of patient dissatisfaction with the care for dry eyes. The difficulties in managing a chronic, variable and multi-factorial problem, often inadequate appreciation by clinicians of the true impact on the patient's lifestyle, and the time and resources required to educate and treat patients appropriately represent a challenge for the treating physician.

It is essential for the rheumatologist, ophthalmologist, and patient to establish good working relationships to optimize continuity of care.

Additionally, if the rheumatologist provides written information to the patient as well as referring physician, it will aid in effective management of dry eye and help minimize its negative effects on patient quality of life.

We invite your comments, corrections, and suggested approach to this challenging issue.