Date: December 5, 1999
From: Bucaramanga, Columbia

Dear Dr. Buzard:

I just reviewed your lecture about SOS contained in the ASCRS-99 CD. I found it very interesting. I am a Columbian ophthalmologist working in LASIK and unfortunately I had an outbreak of 20 eyes with sands of the Sahara in one surgical day (12 Nov-99), using the Hans tome microkeratome from Bausch and Lomb.

Because we had had experience during the previous 4 years with some sporadic cases (around 12 to 15), which went just fin with medical treatment, we began intensive corticosteroid treatment (every hour). 7 eyes which had the most severe inflammation developed some striae in the visual axis, reaching most of them good visual acuity (20/30 or better), but one patient (from another town) who had severe inflammation, but was improving with medical treatment, was discharged 3 days after the surgery advising him to continue applying Pred Forte 1% every hour for several days, and afterward every two hours. He was given an appointment ten days later, but he referred blurred vision ten days after surgery, and when we checked him (2 weeks after surgery) we found a gray central plaque both eyes, with striae, more severe OD. His uncorrected VA was OD 20/100, OS 20/30. His BCVA was OD 20/60 with +1.00 and OS 20/25 with +0.50. With hard contact lens he reached OD 20/40.

The corneal topography shows irregular astigmatism both eyes (with a pattern of reversal keratoconus).

I decided to begin Pred Forte every hour again for a couple of days, and then every weeks after surgery, The question is: Do you think it is convenient to maintain him in steroid medication? Which one and what frequency? We are worried about his cornea, but also about the collateral effects of steroid.

Do you think that Methotrexate® (10mg a week) as you indicate in your lecture, has important corneal changes? How long do you recommend to keep the patient in Methotrexate®? Since I know you have important experience in this field, please advise me about this difficult case.

Thanks a lot,

BUCARAMANGA, COLOMBIA

Dear Dr. (Bucaramanga, Columbia),

I read, with interest, your letter of December 5, 1999 and I apologize about the late response, I am not good about reading my E-mail but hope the following will be helpful.

As I indicated in my lecture, I believe the SOS syndrome is a variation of scleritis with an excess of lytic enzymes released from white blood cells, which result in softening of the cornea and in severe cases even melting. The grayish plaque that you mention represents to me an area of intense WBC activity and I believe that it can be treated and reversed with the use of Methrotrexate®. One problem with steroid treatment is that it seems to be less effective in terms of true control of the disease process then the antimetabolite, Methrotrexate®. I enclose a paper, which I have written on the use of Methrotrexate® in iritis and I have found many cases in which treatment with steroids was ineffective while the Methrotrexate® controlled the situation. A brief review of the literature in rheumatology will show similar points, steroid treatment of the rheumatoid patient results in bone loss due to melting while treatment with Methrotrexate® stabilizes bone loss and actually stops the process of the rheumatoid arthritis. In the case that you describe, treatment is certainly still useful three weeks after surgery but with the significant changes that you note, the action of Methrotrexate® will be delayed for 3-4 weeks. With this in mind, it may be helpful to supplement the Methrotrexate® treatment, which I usually use in doses of 7.5 to 12.5 mg per week with Cytoxan 50mg once daily. Cytoxan is a cytotoxic agent with strong anti-inflammatory properties that can blunt immune response until the Methrotrexate® takes full effect. Unfortunately, I have not found Cytoxan to be an adequate treatment alone but in combination therapy the two can give a faster onset of relief than with Methrotrexate® alone. One final issue is the use of topical steroids, which can be problematic in sclera malcia perforans, actually causing a perforation. I will usually stop topical steroid treatment and rely exclusively on oral treatment in milder cases. In the case that you describe, it is difficult to totally abandon topical steroid treatment but with onset of the action of the Methrotrexate®, I would make every effort to discontinue topical steroids at the earliest opportunity.

I hope that these comments are useful to you and I apologize for the very late response. If I can be of any further assistance, please do not hesitate to call or write.

Dr. Kurt Buzard