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EFFECT OF I-SCRUB ON SIGNS AND SYMPTOMS OF CHRONIC BLEPHARITIS

Rahamim Avisar, Hanna Savir, David Deutsch, and Jacob Teller

ABSTRACT: To assess the effect of I-Scrub (Spectra Pharmaceutical Services), a new detergent eyelid scrub, on the subjective symptoms and objective clinical signs of chronic blepharitis, 20 patients with this disease were treated for three weeks. None of them yielded positive cultures for virulent bacteria from the eyelids and conjunctiva. Most of the patients reported significant reduction in the subjective symptoms and in the severity of the clinical signs as well. No adverse effects were observed. The results of our study suggest that this product is of value as a detergent eyelid scrub in the treatment of chronic blepharitis.

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BLEPHARITIS, an inflammation of the eyelid margins, is an extremely common disease.¹ It is present in almost 20 percent of the general population. Types include simple squamous blepharitis, a superficial nondestructive dermatitis, and follicular (purulent) blepharitis, wherein the follicles and glandular structures are affected, producing either a pustular or ulcerative condition. The margin of the eyelids is hyperemic and covered with yellow crusts. Scarring of the site of ulceration takes place around the base of the cilia. Complications include trichiasis, inversion of the cilia toward the cornea; tylosis, drooping of the lid due to hypertrophy with resulting increased weight; madarosis, in which nearly all of the eyelashes fall out; epiphora, tearing due to eversion of the puncta lacrimalis; and ectropion, eversion of the lower lid and conjunctival hyperemia second-

dary to irritation. Usually the patient complains of smarting, itching, painful eyelids, foreign-body sensation, and a feeling of dryness in the eye.

Chronic blepharitis is a chronic inflammation of the eyelids. It may complicate seborrheic dermatitis; primary meibomianitis; chronic infective (staphylococcal) blepharitis; eyestrain in its widest sense; refractive errors; and external irritants such as dust, wind, smoke, chemicals, and polluted or hygienically bad atmosphere.

There is no definitive treatment for blepharitis and it is frequently a difficult problem. Local treatment consists mainly of maintaining cleanliness with constant removal of crusts, exudates, and scales. In infective blepharitis, a bacteriostatic drug can be used locally. In chronic infections the condition is less dramatic and, if such chronic infections are recurrent, the organism may develop resistance to the drug.

Based on clinical impression, it is accepted that eyelid scrubs (usually baby shampoo) improve chronic blepharitis.²⁻⁴ In one study, I-Scrub (Spectra Pharmaceutical Services) subjectively reduced the itching and discomfort in 15 of 20 treated patients.²

We performed a study on 20 patients to assess the effect of I-Scrub on the signs and symptoms of chronic blepharitis based on a clinical and laboratory evaluation.

Methods

The group under study consisted of 20 untreated patients aged 50-80 years with chronic blepharitis. They all were instructed to clean the eyelids with a cleansing pad wetted but not saturated with I-Scrub twice daily and rinse the lids with clean warm water. The eyelids and conjunctiva were cultured prior to treatment.

All patients were examined by the senior author before and after one and three weeks of treatment. Subjective symptoms were graded accord-

RAHAMIM AVISAR, M.D., is in charge of the Clinic for External Eye Diseases, Department of Ophthalmology, Hasharon Hospital, and a Lecturer, Sackler School of Medicine; **HANNA SAVIR, M.D.**, is the Head of the Department of Ophthalmology, Hasharon Hospital, and Clinical Professor of Ophthalmology, Sackler School of Medicine; **DAVID DEUTSCH, M.D.**, and **JACOB TELLER, M.D.**, are Staff Ophthalmologists, Department of Ophthalmology, Hasharon Hospital, Petah-Tiqva, and Instructors of Ophthalmology, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel. **Reprints:** Rahamim Avisar, M.D., Department of Ophthalmology, Hasharon Hospital, Golda Medical Center, P.O. Box 121, Petah-Tiqva 49372, Israel.

ing to the patients' report and objective signs were recorded by slit-lamp biomicroscopy. Severity of signs and symptoms was graded from zero to three. Redness of lid margin and conjunctival injection were estimated as slight = grade one, heavy = grade two, and very heavy = grade three. Discharge or crusting and seborrheic dandruff on eyelids were estimated as follows: very small amount = grade one, small amount = grade two, and great amount = grade three. Eyelid margin ulceration was estimated according to the number of ulcers present on each eyelid margin: grade one = one to three ulcers, grade two = four to six, and grade three = seven or more.

Slight lacrimation was estimated as grade one, heavy as grade two, and very heavy as grade three. Loss of eyelashes was rated as follows: grade one = loss of almost 10 percent of all eyelashes, grade two = almost 30 percent, and grade three = total loss of eyelashes.

Results

Forty eyes of 20 patients were under study. Fourteen patients had negative cultures (28 eyes); in the other six patients nonpathogenic external flora of the eye were cultured (12 eyes). All cultures were negative for mycotic growth.

Before treatment was started, 14 patients suffered from smarting (70 percent), 12 from itching (60 percent), 2 from a burning sensation (10 percent), 3 from a foreign-body sensation (15 percent), 6 from lacrimation (30 percent), and 2 from a dry-eye sensation (10 percent).

The effect of I-Scrub on the severity of objective signs after three weeks of treatment is summarized in Table 1. The best effects obtained were the reduction of eyelid margin redness, discharge and crusting on the lid margin, and seborrheic dandruff. No effect was noted on the severity of loss of the eyelashes. In no patient did all of the signs fully disappear. Table 2 summarizes the subjective symptoms before and three weeks after I-Scrub treatment. The best results obtained were the reduction of smarting in 35.7 percent, itching in 33.3 percent, and foreign-body sensation in 66.6 percent of the patients. The feeling of dry eyes remained unchanged in all patients.

Discussion

According to its package insert, the I-Scrub formulation contains polyethylene glycol-200 glyceryl monostearate, disodium laureth sulfosuccinate, cocoamido propyl amine oxide, polyethylene glycol-78 glyceryl monococoate, phenylcarbinol, disodium edetate, and purified water USP.⁵ We found the cleansing pads, and the elaborate instructions for their use as recommended by the manufacturer, to be comfortable and well accepted by all the treated patients.

In our study, the severity of the signs and symptoms of the disease were reduced in the majority of the treated

Table 1. Severity of Objective Signs Before and After Three Weeks of Treatment with I-Scrub

SIGN	PATIENTS n*	GRADES†			
		0	I	II	III
Redness of lid margin	18 (90)	0 (2)	8 (9)	6 (5)	4 (2)
Discharge or crusting	11 (55)	0 (1)	3 (5)	6 (4)	2 (1)
Seborrheic dandruff	15 (75)	0 (1)	3 (4)	4 (6)	8 (4)
Lid margin ulceration	2 (10)	0 (2)	2 (0)		
Conjunctival injection	4 (20)		2 (3)	2 (1)	
Lacrimation	1 (5)	0 (1)	1 (0)		
Loss of eyelashes	6 (30)		6 (0)		

*Percentage of the whole group under study is shown in parentheses.

†The number of patients presenting with the sign after three weeks of treatment is shown in parentheses.

Table 2. Severity of Subjective Symptoms Before and After Three Weeks of Treatment with I-Scrub

SYMPTOM	PATIENTS n*	GRADES†			
		0	I	II	III
Smarting	14 (70)	9 (2)	7 (6)	5 (6)	2 (0)
Itching	12 (60)	0 (1)	3 (3)	7 (7)	2 (1)
Burning sensation	2 (10)	0 (1)		2 (1)	
Foreign-body sensation	3 (15)	0 (2)	3 (1)		
Lacrimation	6 (30)		5 (6)	1 (0)	
Feelings of dryness	2 (10)		2 (2)		

*Percentage of the whole group under study is shown in parentheses.

†The number of patients presenting with the symptom after three weeks of treatment is shown in parentheses.

patients. Although some signs and symptoms were not influenced by the treatment, in no case was deterioration observed. We do not know how the drug ingredients achieve their effect.

Based on the data obtained in the present study, we conclude that I-Scrub has a positive therapeutic influence on chronic blepharitis. \approx

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