LETTERS

Ed. Note – The following letters were recevied in response to the Inns Contact Lens article Mar CJO – see next pg for Dr. Inns' Reply

Dear Editor:

With reference to the article entitled "Soft Contact Lenses and Solutions in Canada" by Doctor H.D.E. Inns, that appeared in the Canadian Journal of Optometry of March, 1980, I wish to respond to what I feel are not completely accurate statements.

While I agree with Doctor Inns in dividing soft contact lens cleaners into three specific categories, I do not agree with his statement that "the purpose of a surfactant cleaner is to mobilize, emulsify and remove proteins . . ." Studies done by Doctors Kleist and Thorson[1] have shown surfactant cleaners to be ineffective in removing protein deposits from the surface of soft contact lenses. Various other studies have recorded similar findings.[2][3] The enzyme (papain) cleaner must be categorized by itself, and not be grouped with surfactant cleaners.

Under (C) Enzyme Cleaners (page 29), Doctor Inns states that "papain (as used in meat tenderizers) is the enzyme usually used in this type of cleaner." It is true that papain in a crude form is used in meat tenderizers, but the highly purified and sophisticated form used in Hydrocare Protein Remover Tablets is quite different in quality as there is a chance of its coming into contact with delicate human tissues. I can assure Doctor Inns that the enzyme product manufactured by Allergan always contains this very special quality papain.

Doctor Inns goes on to say that a "greater drawback is the danger of ocular sensitization to papain with potentially injurious effects." When the enzyme is used as indicated in the instructions leaflet i.e. the lenses are rinsed well with saline after the cleaning process, no serious side effects occur. This has been confirmed in studies done by Doctor Amano[4] and Doctor Bellemare.[5] Further, no ocular sensitivity and certainly no "potentially injurious effects" have ever been demonstrated on clinical challenge. Anything coming into contact with the eye can be termed potentially dangerous, e.g. a finger.

Please note that Hydrocare Cleaning/Soaking Solution contains alkyltriethanol ammonium chloride and thimerosal. This formulation was omitted in the section (3) Chemical Disinfection (page 30).

Because of its widespread use, it must have come as a surprise to many optometrists that Hydrocare was not mentioned as a system and, in addition to trying to clarify some of Doctor Inns' statements, I would like to describe the Hydrocare Multi Pack, which comprises of:

- Hydrocare Cleaning/Soaking Solution: a sterile, buffered, isotonic solution containing alkyltriethanol ammonium chloride, thimerosal 0.002% and surfactants, in a special polymer vehicle (120 ml);
- Preserved Saline Solution (120 ml);
- Hydrocare Protein Remover (6 tablets);
- Storage case.

Method of use:

Lenses cleaned with Hydrocare Cleaning/Soaking Solution, rinsed with additional solution and stored in lens case containing Hydrocare Cleaning/Soaking Solution. The lenses are rinsed with Allergan Preserved Saline prior to insertion in the eye. Once a week, the lenses are cleaned with the Hydrocare Protein Remover. Our recommendation is to dissolve the Hydrocare Protein Remover Tablet in distilled water and not Saline, as indicated in Table 5.

We think that the objective of clarifying the care products available is a desirable one, and Doctor Inns has done quite a bit of work. It is with the spirit of further clarification that this letter is written.

Respectfully,
Mehbs Remtulla B.Sc. (Pharm)
Marketing Associate
Allergan Inc.

REFERENCES

1. Kleist F.D. Thorson J.C.—"How effective are soft lens cleaners?", Review of Optometry, April 1978, 115 (4) 43-45.
2. Leiblen J.S.—"How important is enzymatic cleaning? An in-office evaluation", International Contact Lens Clinic 1979, 6 (3) 80-82.
3. Kleist F.D., "Appearance and nature of hydrophilic contact lens deposits—Part I: Protein and other organic deposits", International Contact Lens Clinic, Vol.6, No.3, May/June 1979.
4. Amano J.—"The effects of an enzyme cleaner on soft contact lenses", Toyo Contact Lens Co. Ltd.
5. Bellemare F.—"Compatibility of enzymatic cleaning with cold contact lens disinfection", International Contact Lens Clinic, Sept/Oct 1979.

Dear Dr. Belanger:

Further to many enquiries we have received relating to the article entitled "Soft Contact Lenses and Solutions in Canada" by Dr. Harry Inns in the C.J.O. March 1980 Edition, I would like to clarify a statement in the article which has led to some confusion. Table 1 of the article indicates an incompatibility of the Aquaflex lens with enzymatic cleaners. Many practitioners in Canada have used enzymatic cleaners with the Aquaflex lens over several years with no apparent incompatibility problems being reported. The manufacturers of enzymatic cleaners also have informed us that their products are compatible with the Aquaflex lens.

We would like to congratulate Dr. Inns on an excellent article and hope that this correction will be noted by those practitioners using this article as a reference source.

Sincerely,
Uno Leis
National Sales Manager
Union Optics Corporation
(Canada) Ltd.

LETTERS

The Author Replies:

In a paper as all encompassing as "Contact Lenses And Solutions in Canada" there are certain to be some omissions and such a paper is almost out of date from the moment it is written. The tables should be amended from time to time as necessary, and several manufacturers have offered suggestions. Union Optics states that enzyme cleaning systems can now be used with its Aquaflex lenses. This letter will deal with the question of enzyme cleaners and offer changes or updates where they are required.

In answer to the letter from Mehbs Remtulla of Allergan Canada Ltd. Canadian practitioners should be aware of the research papers that confirm my statement that there is "the danger of ocular sensitization to papain with potentially injurious effects."

In a paper "Iatrogenic Red Eyes in Soft Contact Lens Wearers" (International Contact Lens Clinic Sept/Oct 1978) Fichman, Baker and Horton report on research supported in part by a National Science Foundation (Canada) research grant. They used Biochemical studies to assay the amount of lens-bound papain in soft contact lenses using a modified spectrophotometric procedure. They report as follows. "Biochemical assays of new lenses not worn by patients reveal that, in general, residual papain appears to be associated with hydrophilic lenses that have been exposed to enzyme cleaning solutions and that the absorbed papain remains enzymatically active. In most instances, attempts to remove proteolytic activity appeared ineffectual. It is important, therefore, that patients wearing soft contact lenses be informed that use of an enzymatic soft contact lens cleaner containing papain is likely to cause ocular irritation due to active enzyme remaining on the lens surfaces."

Therefore, there seems to be a contraindication for the use of the enzyme in association with the chemical soft contact lens regimen, as this may lead to "enzymatically induced" red eyes.

They did a further clinical study in which 25 patients were supplied with new lenses and were instructed to use the chemical regimen daily and once a week to clean only the RIGHT LENS with the enzymatic cleaner. Eight of the 25 patients returned within the two-week period with redness in the right eye. Twelve others developed a red eye within 3 months, while the remaining 5 showed no adverse symptoms within the 3-month study period.

A letter in the Contact and Intraocular Lens Medical Journal (July/Sept 1980) vol. 6 no. 3 by Jack W. Moore states as follows: "When we applied the indiscriminate use of the product (enzyme cleaner) to all of our soft lens patients, some of whom were using higher water content lenses, we began to experience difficulties. The difficulties encountered were superficial keratitis with punctate distribution, extreme conjuctival infection, and mucus discharge. These complications were all medical management problems that required treatment with steroid-antibiotic combination drops. The majority of these patients returned to the same chemical disinfection regimen, except for the removal of the Enzymatic Contact Lens Cleaner, without additional problems, indicating to us that the Enzymatic Contact Lens Cleaner should not be used in the higher water content lenses. We still recommend the use of Enzymatic Contact Lens Cleaner in Bausch & Lomb or other soft lenses of water content under 40%.

Jack W. Moore also stated that Stuart Eriksen Ph.D. (Vice-President, Allergan Contact Lens Research) recommended that he modify the Enzymatic soaking regimen to be no longer than 2 hours with a longer overnight soaking in the prescribed saline to permit greater dilution of the enzyme.

In my original paper I drew attention to the danger of ocular sensitization to papain. Scientific honesty required that this danger be reported in any paper on contact lens solutions. The reader should carefully evaluate all the information he can obtain on any product before he takes the professional responsibility of supplying it to a patient.

Last fall, Bausch & Lomb introduced a further cold disinfection system and they suggest that the following changes and additions should be made to the tables. On page 34, Table 2, the Systems under Details of Use, it should read Lenses are pre-cleaned with surfactant cleaner (Bausch & Lomb Daily Cleaner) then put in Lensgard case containing Bausch & Lomb Soflens Saline Solution, then heated at 90°C for 60-75 minutes—has automatic shut off. The next column under Additional Details, lenses are stored in Bausch & Lomb Soflens Saline Solution and not Soflens Soaking Solution. Soflens Soaking Solution on page 35 should go on Table 2 under cold disinfection on page 34. A rinse with saline solution is advocated. The Aseptor Heat System, the Soflens Soaking Solution System, the Disinfecting Solution System should go under "Systems" on page 34. On Table 3 the Salines, page 35, instead of Soflens Soaking Solution, it should be Soflens Saline Solution and the purpose is for rinsing, soaking, storage and disinfection with heat. On Table 4 under the Surfactants, Bausch & Lomb Daily Cleaner should be included. On Table 5, Soflens Cleaning Tablets should remain and the purpose is to remove protein. Bausch & Lomb Salt Tablets should be taken out. In Table 6, Bausch & Lomb Lens Lubricant should be included.

H.D.E. Inns O.D., F.A.A.O.