
LETTERS TO THE JOURNAL

Sir,

Corneal Injury Caused by Correction Fluid

In a 6 month period we have treated four casualties who have suffered corneal injury from typewriter correction fluid. This white, viscous liquid is commonly used by students to correct mistakes in their work. It is a combination of opaque, inert pigments with halogenated hydrocarbon solvents, trichloroethylene and 1,1,1-trichloroethane.¹ It is packaged in a small bottle and is applied to paper with a brush. Once applied the liquid dries to a hard, opaque finish within a minute. All the patients we examined were young students correcting homework or course work at school.

Case 1

A 14-year-old boy accidentally flicked correction fluid into his left eye while amending a written error during a school lesson. He complained of a stinging sensation and was immediately sent to the eye casualty where his eye was irrigated. Visual acuities were 6/4 in both eyes. On slit lamp examination he had perilimbal injection of his left eye. Several fine spots of correction fluid were present on his inferior, bulbar conjunctiva and his inferior cornea. The anterior chamber was deep and quiet. Due to the fine nature of the corneal deposits, no attempt was made to remove these. Chloramphenicol drops q.d.s. was prescribed but the patient failed to attend the follow-up appointment.

Case 2

A 12-year-old girl presented with correction fluid in both eyes. She had accidentally flicked the liquid into both eyes when pulling the applicator brush out of the narrow neck of the correction fluid bottle. On presentation both eyes were irrigated. Her visual acuities were 6/4 in both eyes. Neither eye was injected, but both corneas were covered with a fine spattering of correction fluid. Both anterior chambers were quiet. As the patient was in no discomfort with good vision, she was treated conservatively with guttae chloramphenicol q.d.s. At review, 1 week later, almost all the correction fluid particles had gone.

Case 3

A 16-year-old boy presented after accidentally

flicking correction fluid into his left eye while correcting course work at home. The left eye was immediately irrigated on arrival. Visual acuities were 6/6 in both eyes. On slit lamp examination, he had a thin, paracentral, comma-shaped strip of correction fluid on the cornea. The eye was comfortable and he was treated conservatively with guttae chloramphenicol q.d.s. One week later, the correction fluid strip had broken up and was almost completely gone.

Case 4

A 15-year-old girl accidentally flicked correction fluid into her right eye (Fig. 1) while removing the applicator brush from the bottle. She was at school correcting an essay. The visual acuities on presentation were 6/18 in her right eye and 6/6 in her left eye. The right eye was irrigated on arrival at casualty. On slit lamp examination the right eye was mildly injected. The central cornea was covered with a thin film of correction fluid. The anterior chamber was quiet. She declined to have the correction fluid scraped from her cornea and so was treated conservatively with guttae chloramphenicol q.d.s. One week later, most of the correction fluid had fallen off and her visual acuity had improved to 6/6.

Discussion

Most brands of correction fluid utilise the solvent 1,1,1-trichloroethane. This has a toxicity which is considerably lower than that of most other chlorinated hydrocarbons. A splash of liquid 1,1,1-trichloroethane in the eye causes immediate conjunctival irritation

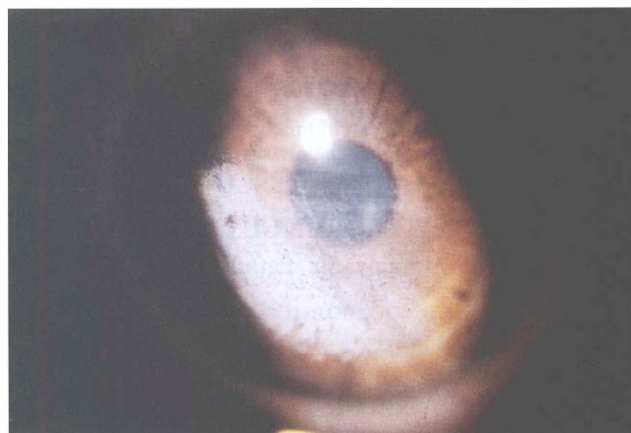


Fig. 1. Slit lamp view of case 4, showing correction fluid staining the anterior corneal surface.

associated with tearing. The corneal epithelium may be injured but recovery occurs within 48 hours.²

Three of our patients complained most about the initial irritation caused by the correction fluid but suffered no decrease in visual acuity. Their symptoms settled quickly. However, the fourth patient experienced a marked reduction of visual acuity in the right eye which took a week to recover. In the above cases, a significant proportion of the correction fluid had come off the cornea at 1 week. Thus a conservative approach proved effective in these school children.

Besides being packaged as a liquid, correction fluid is also available in the form of a rollerball pen and as transfer sheets. These latter products are much less likely to lead to ocular injury, particularly when used by young children, making them more suitable for school use.

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References

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Sir,

A Case of Conjunctival Involvement with Mycosis Fungoides Successfully Treated by Surgery

Ocular localisation of mycosis fungoides may occur in up to a third of advanced cases and most frequently presents as tumours or infiltration of the eyelids.^{1,2} However, conjunctival involvement with mycosis fungoides has been reported only rarely.^{1,3}

Here we report a case of mycosis fungoides involving the conjunctiva, successfully treated by surgery.

Case Report

The patient was a 34-year-old man with a 7-year history of cutaneous T-cell lymphoma stage IIb (TMN classification: T2, N1, M0). The disease was initially controlled with PUVA therapy. In 1990, however, the sudden spread of the lymphoma led to treatment with recombinant interferon- α 2a (rINF-

α 2a) and etretinate,⁴ administered according to the following protocol: 3 million units of subcutaneous rINF- α 2a every other day plus 50 mg/day etretinate. This treatment reduced the skin lesions by approximately 70%. The drugs were therefore tapered to a maintenance dose of 25 mg etretinate twice a week from January 1992. Treatment was suspended in September 1993 because the skin manifestations had completely regressed.

During a check-up at the beginning of 1994, signs of relapse of the disease were noted and the patient reported a conjunctival lesion in the left eye. Dermatological examination revealed two new infiltrating plaques on the abdomen. Ophthalmological examination showed a nodule involving the temporal region of the eyeball about 2 mm from the corneal limbus and touching the external canthus of the left eye (Fig. 1). The conjunctiva seemed to have thickened around the lesion. The nodule had a rubbery consistency and there were many telangiectatic vessels on its surface. Slit lamp observation showed that the nodule was completely mobile with respect to the sclera when touched with cotton under local anaesthetic. It was decided to remove the lesion surgically for both therapeutic and diagnostic purposes. Bupivacaine-adrenaline (Marcaina with adrenalin R) was injected under the conjunctiva inferior to the nodule and cauterisation of all the perilesional conjunctiva was performed. The conjunctival tissue inside the cauterisation was completely excised. Despite the fact that the lesion seemed to be completely isolated from the underlying layers, the corresponding episclera was also excised. To facilitate cicatrisation an advancement of a conjunctival flap was performed.

Sections of the nodule were stained with haematoxylin-eosin and periodic acid-Schiff (PAS) and examined by light microscopy. Sheets of medium-sized atypical lymphoid cells involving the subepithelial stroma were observed (Fig. 2). Pautrier microabscesses were also noticed in the epithelium. At

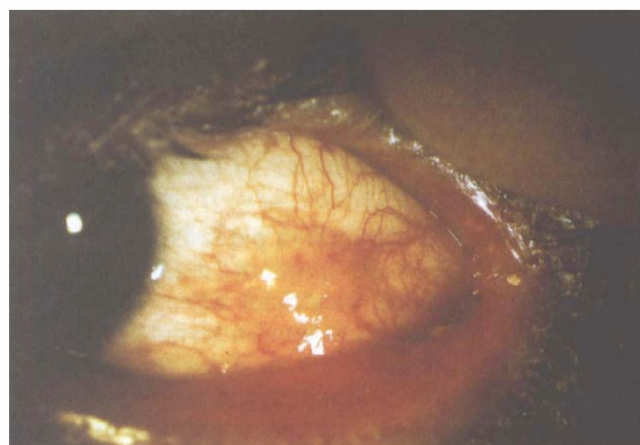


Fig. 1. Clinical appearance of the conjunctival nodule.