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### تقرير اكلينيكي

## الالتهاب الكيمايى للمتحمة والقزنيه لقط سيامى

### جعفر عثمان

فى هذا التقرير الأكلينيكى تم وصف وتشخيص حالة قط سيامى تعرضت عينه اليمنى بصورة عرضيه لشظيه من قاعدة بوتاس التنظيف الخام ، كما تم وضع ووصف البرنامج العلاجى الذى أتبع فى علاج هذه الحالة ... وقد استجابت هذه الحالة للعلاج المتبع استجابة جيدة كما سجلت مختلف النتائج وتمت مناقشتها تفصيلا .



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**CHEMICAL KERATOCONJUNCTIVITIS IN SIAMESE CAT**  
**(CLINICAL REPORT)**  
(With 4 Figures)

By  
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**SUMMARY**

A one year household male Siamese cat was presented to the Vet. Surgery Clinic with an owner's complaint that since one day ago, the cat was playing with an uncovered container of crude potash detergent of which a particle accidentally gained entrance into the right eye. Forthwithly, the animal appeared very excited as if it a made; loudly mewing, running allover the apartment and preferring concealment in dark sites below beds, chairs, etc. The injured eye quickly developed a whitish discolouration on its anterior surface. The animal was refusing the offered habitual food and was not responsive. No treatment was carried out by the owner.

**Clinical Examination and Diagnosis:**

Physical examination was conducted on the second day of the attack. It revealed hyperexcitability, restlessness and tendency to rub the affected side of the face and the afflicted eye with its foot or against tables and obstacles. The affected eye showed blepharospasms, hypersensibility and excessive lacrimation with the eyelids were adhered together. The conjunctiva and nictitating membrane were severely injected and swollen, the sclera was slightly elevated and the cornea was heavily inflamed through its entire thickness and showed an opaque dense white greyish or bluish discolouration with loss of its lustrous architecture (Fig. 1). The entire anterior view of the eye seemed to be vanished and its appendages were sufficiently swollen so that the plapebral fissure was constricted and the vision was thus obscured.

The condition was diagnosed as an acute deep keratitis leading to leucoma. In addition, there was an associated conjunctivitis, scleritis and blepharitis as a result of the deleterious caustic effects.

**Treatment:**

Initially, the cat was sedated by 15 mg. (5 mg./Kg.b.wt.) Neurazine<sup>®</sup> injected subcutaneously. The residue of the caustic alkaline which was already diluted to some extent by the persistent weeping and lacrimation was further neutralized through irrigation of the eye with 1 % warm boric acid solution. Thereafter, measures were endeavoured towards an attempts to reduce and relieve the inflammatory phenomenon which had taken place. Therefore, a

<sup>®</sup>) Neurawine

: Chlorpromazine-HCl, Misr Co. for Pharm. Indust., S.A.A., Cairo, A.R.E.

few millimeteres of a combination of 0.25 % Prednisolone and 0.16 % Neomycin-HCl (Cambison @@) eye ointment were spread into the conjunctival sac and gently rubbed over the integument of the eyelids every 4-6 hours daily for a week. Meanwhile, 1% Atropine sulphate @@@ eye ointment was similarly used thrice daily and the animal was kept in a dark room.

Following withdrawal of the previously mentioned therapy, 20 % Solcoseryl @@@@ eye ointment were alternatively spread into the conjunctival sac several times daily for three weeks. During the last two weeks of such stage of treatment, Dionine @@@@@ eye ointment was introduced for a similar topical use twice daily for 3 weeks.

### RESULTS and DISCUSSION

Having fulfilled the previously prescribed therapeutic programme, a satisfactory encouraging results were obtained and the attack was thus aborted. Initially, the excessive lacrimation was greatly diminished on the third day of treatment and eventually ceased on the fifth day. The intense injection of the conjunctiva and the swelling of the nictitating membrane got disappeared with the end of the first week of treatment. Such preliminary results are attributed to the topical use of the synthetic corticosteroid, Prednisolone together with the antibiotic, Neomycin-HCl of the Cambison eye ointment. Prednisolone was found indicated to reduce and hold the acute inflammatory processes which had taken place into the eye.

It interfere with the exudative phases of inflammation thus inhibiting the fibroblastic formation during the process of repair (DUKE-ELDER; 1969). Its effect is thus limited to the blocking of the pathological evidences of inflammation so long as its topical use is continued. Therefore, the antibiotic fraction of such ointment was necessary to check against invasion of the secondary virulent bacteria which are frequently already available in the conjunctiva sac (DUKE-ELDER; 1969, KHAMIS and GHONIEM; 1970 and PLAKHOTIN; 1982). The successful results obtained by this treatment in the present case agree with the clinical findings experienced by FRIEMANN (1958), KHAMIS and GHONIEM (1970) and SHOKRY and GRIGORIADIS (1981) for many corneal lesions in animals.

It is worthy to report that the application of corticosteroids or other analogous drugs for ocular purposes particularly those of early deep keratitis should only be indicated when the corneal tissue is not ulcerated (MAGRANE; 1955 and SCHMIDT; 1976). Thus, these medications should be adopted very cautiously according to the condition of the cornea. Moreover, owing to the well known fact that corticosteroids do not affect the cause of the condition whatever may be; chemical, organismal or otherwise, but merely provide the mesenchymal tissues with protection against the causative agents, it was found that further treatment of the affected cornea was required.

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- @@) Cambison : Prednisolone, Neomycin-HCl & aminoquialdine Urea-HCl, Hoechst Frankfurt, Germany.
- @@@) Atropine Sulphate : The Nile Co. for Pharm. and Chem. Indust., Cairo, A.R.E.
- @@@@) Solcosery : Solco Basle, Switzerland.
- @@@@@) Regepithel : Dr. Thilo & Co. GmbH, Pharm. labs., Munich-Sauerlach, F.R.G.
- @@@@@@) Ethylmorphine-HCl, The Nile Co. for Pharm. & Chem. Indust., Cairo, A.R.E.

**KERATOCONJUNCTIVITIS IN CAT**

The prophylactic use of the mydriatic, Atropine sulphate was adopted with the aim of double purpose of keeping the ciliary body and iris at rest and for prevention of anterior synechia. Its use was persisted for only one week simply because of the possible intoxication to be elicited in longer term use in small animals as reported by PLAKHOTIN (1982) apart from the quite sufficiency of such period for the said purposes. PLAKHOTIN (1982) added that in case where long term use for mydriasis is indicated, atropine should be substituted by the mydriatic scopolamine.

The alternate use of Solcoseryl eye gel, Regepithel and Dionine eye ointments proved to be very beneficial since the opaque white-greyish corneal discolouration began to regain its transparency and lustrous appearance after 15 - 20 days and attained its full transparency after 5 weeks from the onset of treatment (Figs. 2, 3 and 4).

Solcoseryl eye gel is a deproteinised extract from the blood of young calves in a fact free base. MEYTHALER and PFANN (1969) stated that the drug improves the utilization of oxygen and promotes the absorption of metabolites particularly in organs with insufficient oxygen supply such as the cornea. However, similar results were obtained by OBERHOLSTER (1967), LAGEMANN (1975) and SHOKRY and GRIGORIADIS (1981) for treatment of many corneal lesions in animals with Solcoseryl.

Regepithel eye ointment contains vitamin A, chloride-HCl and calcium pantothenate which are proposed to act synergistically for nutrition and regeneration of the defective cornea.

The promising results which outstanced in the removal of the corneal opacity are attributed to the ethylmorphine-HCl of the Dionine ointment. This is in agreement with the statement of PLAKHOTIN (1982).

The clinical parameters of the previously said programme was by virtue pointed out in the responsive reaction of the iris to light and the remarkable and eventual improvement of the present case which resumed its natural visual function with the end of the fifth week of treatment.

In my opinion, it must be emphasized that the earlier the investigation of emergent ocular injuries due to chemical agents, the more favourable the prognosis and good results provided that accurate diagnosis is achieved and the proper treatment is fulfilled.

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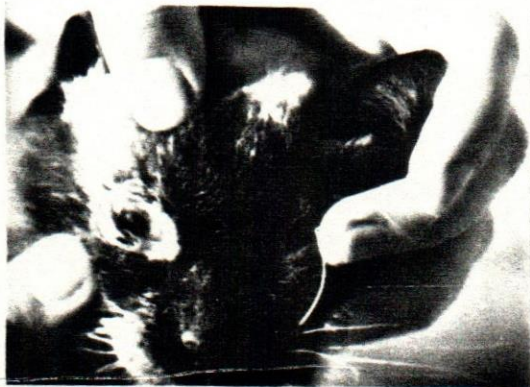
(Fig.1) The afflicted right eye of Siamese cat on the second day of chemical keratoconjunctival attack



(Fig.2) Showing alleviated conjunctiva with partial relieve of the inflamed cornea 2 weeks post therapy.



(Fig.3) A more advanced stage of corneal improvement 3 weeks after remedy.



(Fig.4) The eye after complete recovery 5 weeks post therapy.

