ERYTHROMYCIN IN TRACHOMA*

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ERYTHROMYCIN is a new antibiotic produced by a strain of *Streptomyces erythreus*. The clinical indications for the drug are as yet undetermined. It is said to be effective against Gram-positive cocci, Gram-negative cocci, the *Clostridium* group, anthrax, *Haemophilus pertussis*, and Rickettsiae and certain viruses.

Material and Methods

A series of 100 patients with trachoma in the infiltrative or follicular stage, in which inclusion bodies could be seen, was selected for this study. Conjunctival scrapings were obtained from the upper fornix by a sharp curette and spread on a slide, care being taken that no blood oozed out. The scrapings were stained by methylene blue and citric acid stain according to the technique of Poleff (1952), who recommends that the smear should be stained for 3 minutes. We found that the smear should be stained for 4 minutes to get good results.

Fifty cases were used as controls to whom no treatment was given except normal saline drops (Agarwal and Gupta, 1954).

Fifty cases were given erythromycin tablets 100 mg. 4-hrly for a week, with local application of ointment in concentration of 5 mg./g. two to three times a day.

A search for inclusion bodies was made in stained slides every 2 weeks. The treatment was continued in several cases even after the inclusion bodies were absent from the smears. The treatment was continued for 6 weeks and final examination and assessment was made at the end of this period. The presence and progression or retrogression of pannus was also recorded during the period of observation. Such subjective symptoms as photophobia, redness, discharge, irritation, and gritty sensation were also taken into account and the effect on them of the drug was noted.

Results

Untreated Cases.—Inclusion bodies were present in all four specimens of tissue scrapings in all cases; this confirmed our previous finding that inclusion bodies did not disappear without treatment. The subjective symptoms did not improve.

Treated Cases.—The subjective symptoms started improving within 24 hours and disappeared within 3 days. The pannus retrogressed in 50 per cent. of the cases and in these the inclusion bodies also disappeared (see Table).

Toxicity.—In three cases the local application of erythromycin ointment caused a reaction which manifested itself either in heaviness or swelling of the lids or in conjunctival congestion. In one case an eczematous reaction was seen. In only one case out of fifty was a gastro-intestinal reaction in the form of mild diarrhoea observed. In these five cases treatment was discontinued.

*Received for publication June 2, 1954.

TABLE
RESULTS OF TREATMENT BY ERYTHROMYCIN

Cases Treated	Clearance of Secondary Infection	Improvement of Secondary Symptoms	Disappearance of						Per cent. Cured
			Pannus			Inclusion Bodies			
			2 wk	4 wk	6 wk	2 wk	4 wk	6 wk	
50	24 hrs	24 to 72 hrs	2	11	12	6	9	10	50

Discussion

The search for a suitable antibiotic or chemotherapeutic drug for the effective treatment of trachoma continues, although quite satisfactory results have been obtained by the use of sulphacetamide and other sulphonamides.

In view of the variable responses to various drugs it is thought that either the sensitivity of trachoma virus to various therapeutic agents is not uniform, or there is more than one strain of trachoma virus.

The response to erythromycin indicates that it is quite an effective agent against trachoma virus as shown by the disappearance of inclusion bodies from smears in 50 per cent. of cases. This series also shows that erythromycin is a quick-acting drug, as in many cases the inclusion bodies had disappeared when the second scraping was taken, *i.e.* in the second week.

The subjective symptoms showed uniform response and the pannus retrogressed in the cases which responded to this therapy. In a few cases, which have been labelled as negative, the subjective symptoms were relieved and the pannus showed some degree of retrogression, but the condition did not completely resolve. If the treatment had been continued for a longer time, better results might have been obtained. Erythromycin has proved worth a trial.

Summary

(1) The study of 100 cases was controlled by the demonstration of inclusion bodies in conjunctival scrapings at intervals of 2 weeks.

(2) Erythromycin was found to be quick-acting and effective in 50 per cent. of cases.

(3) Oral therapy (42 tablets of 100 mg. each) combined with local ointment (5 mg./g.) is recommended.

The authors wish to express their thanks to Eli Lilly and Co., Indianapolis, 6, Indiana, U.S.A., for the supply of erythromycin (Ilotycin, Lilly).

REFERENCES

- AGARWAL, L. P., and GUPTA, B. M. L. (1954). *British Journal of Ophthalmology*, **38**, 119.
POLEFF, L. (1952). *Amer. J. Ophthalm.*, **35**, 627.

CORRIGENDUM

It is regretted that in a previous report from this department (*B.J.O.*, **38**, 119) Dr. M. A. Shah was misquoted as stating that aureomycin was useful against trachoma. He has informed us in a personal communication that he has found aureomycin ineffective in this condition.