

## TREATMENT OF EXPERIMENTAL TRACHOMA IN A HUMAN VOLUNTEER\*

### FINAL REPORT

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As previously described (Mann, Greer, Perret, and McLean, 1960), a human volunteer was experimentally infected with a West Australian strain of trachoma virus. After the successive appearance of conjunctival hyperaemia, pre-auricular adenitis, tarsal follicles, epithelial keratitis, papillary hypertrophy, and pannus, treatment was commenced on the 31st day after infection. This report completes the experiment with a brief account of the treatment and cure of the patient who was followed up for 9½ months.

#### Progress

On the 31st day after infection, treatment was started with one tablet a day of Lederkyn by mouth and Aureomycin ointment locally every 2 hours during the day. Within 24 hours all discharge ceased, the pre-auricular gland commenced to subside, and the limbal vessels became less engorged.

On the 3rd day of treatment the blood column in the pannus vessels was seen to be interrupted. By the 6th day only one recognizable aggregation of initial bodies was found in the conjunctival scrapings. The patient now complained of irritation from the Aureomycin ointment, which was, however, continued.

On the 7th day the pre-auricular gland was no longer palpable and the pannus vessels, although visible, were no longer engorged. Marked papillary hypertrophy of the conjunctiva persisted, but it was now possible to see (with the slit lamp) large numbers of tiny opaque spots under the epithelium of the upper tarsal plate and of the lower fornix. These were possibly lymphocytic aggregates and the precursors of future follicles.

On the 14th day of treatment Lederkyn was discontinued and it was necessary to substitute Achromycin in oil for the Aureomycin ointment because of discomfort in the treated eye. The pannus vessels were now almost bloodless and the upper tarsal conjunctiva was smooth and almost normal in appearance. Slight epithelial keratitis persisted. Giemsa-stained scrapings from the upper tarsal conjunctiva showed no virus inclusions.

Treatment was continued with Achromycin in oil three times a day for 6 weeks, at the end of which time the eye was quiet and symptomless with faint speckling of the upper tarsal conjunctiva suggestive of early scarring. Fine punctate staining of the lower half of the cornea persisted. Conjunctival scrapings showed only normal epithelial cells and a few lymphocytes.

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About 1 month later a small marginal ulcer appeared on the nasal side of the conjunctiva. This ulcer, which was not in our opinion due to trachomatous infection, healed within 2 months. The punctate staining in the lower cornea disappeared at about the same time.

At the last examination, 9½ months after treatment commenced, the upper tarsal conjunctiva was normal, the pannus vessels were barely visible, and conjunctival scrapings showed no abnormality.

Virus isolation was attempted on the 8th and 42nd days after treatment commenced and at the very end of the 9½-month period. The scraping on the 42nd day grew bacteria which killed the embryos on its first egg passage. Two blind passages were made in each of the other two attempts but no virus was isolated. Serum samples, taken at monthly intervals during the 9½ months of treatment, were tested for complement-fixing antibodies to the heat-stable group antigen of the psittacosis-lymphogranuloma venereum group of viruses, but no antibodies were detected.

#### REFERENCE

MANN, I., GREER, C. H., PERRET, D., and MCLEAN, C. (1960). *Brit. J. Ophthalm.*, **44**, 641.