The condition may be regarded as a minimal form of maldevelopment of the optic cup; grosser forms are known, which result in the formation of the various degrees of congenital cyst of the eye.

The other form of congenital ectropion uveae is that in which the two ectodermal pigment layers remain in contact but come to lie further round on the anterior surface of the iris than usual. This is ascribed to a simple overgrowth or to dragging of the layers by inflammatory tissue; it is not associated with persistence of the marginal sinus.

Very small grape seed bodies are sometimes seen around the pigment border of the iris. These occasionally become loose and float in the anterior chamber as small, rounded pigmented bodies. That they really are detached corpora nigra is shown by a case of Dymischitz, in which from one half of the iris border they had become detached as a beaded string lying in the anterior chamber, while those of the other half were still in place on the iris.

No treatment has been given to this patient.

Summary.—A description is given of a rare case of iris flocculus with anterior synechia, and a note on the development of flocculi.

REFERENCES

- DYMSCHITZ.—*Arch. f. Ophthal.*, Vol. CXXVII, 1931.
 MANN.—*Development of the Human Eye*. Cambridge University Press. 1928.
 ——— *Developmental Abnormalities of the Eye*. Cambridge University Press. 1937.
 REIS.—*Zeitschr. f. Augenheilk.*, Vol. XXII, 1909.
 STAHLI.—*Klin. Monatsbl. f. Augenheilk.*, Vol. LXV, 1920.
 VOGT.—*Atlas d. Spaltlampenmikroskopie*. Berlin. 1931.

UNILATERAL MEMBRANOUS CONJUNCTIVITIS, WITH COMPLETE CAST*

BY

J. F. GALPINE

MEDICAL SUPERINTENDENT, CITY ISOLATION
HOSPITAL, COVENTRY

and

DOROTHY R. CAMPBELL

OPHTHALMIC SURGEON, COVENTRY AND
WARWICKSHIRE HOSPITAL

THE patient was a girl of six years old, admitted to the City Isolation Hospital on October 11, 1942, with a moderate attack of scarlet fever. The rash was well marked and the throat was injected, with rather extensive semi-confluent follicular exudates on

* Received for publication, June 1, 1944.

both tonsils. She was given 3,000 units of anti-streptococcal serum intramuscularly on the day of admission, and this was followed by a satisfactory resolution of the angina and rash. A routine culture for K.L.B. taken from the nose and throat on October 17 was reported negative.

A severe inflammatory condition of the left eye developed on October 23. There was a great deal of discharge which was suggestive of gonococcal ophthalmia. On closer examination the inner surface of the lids seemed to be coated with early membrane. A culture from the eye was negative for K.L.B. and positive for haemolytic streptococcus, but 8,000 units of anti-diphtheric serum were given on October 25 as a precautionary measure.

On October 26 the eye was examined by one of us (D.R.C.) and it then had the appearance of membranous conjunctivitis. In view of the culture report it was regarded as streptococcal. Frequent irrigations with hydrarg. oxycyan. dil. lotion and oily flavine drops were ordered. The good eye was protected with a Buller's shield. On the following day the sister reported a vaginal discharge. A direct smear was taken, which showed a large number of pus cells with organisms which morphologically resembled gonococci. On being cultured only staphylococcus albus grew. A second report from the eye still showed the presence of streptococci.

By October 31 the membrane was so extensive that it almost hid the cornea, and the latter had become cloudy in its lower half as though suffering from lack of nutrition. The membrane was exactly like chamois leather and extended from the limbus as a complete lining throughout the conjunctival sac. At no time was the pre-auricular gland enlarged. The appearance of the cornea on that day looked as though it could not possibly survive. A further injection of 60,000 units of A.D.S. was given because at this time we could not be certain that the condition was not diphtheritic.

On November 7 the membrane began to separate from the margin of the lower lid, and this separation continued slowly. The cornea was almost hidden, but perception of light was retained. On November 28 the membrane came away as a complete cast. The under surface of the lids was rather red and raw, but healed very rapidly by treatment with saline lotion and cod-liver oil drops.

During the period of separation of the cast the patient was given three injections intramuscularly of T.A.B. 0.1 c.c. on November 6, 0.3 c.c. on November 10, and 0.5 c.c. on November 14. Although the eye condition had subsided by the end of November, there was a recurrence of the vulvovaginitis, and on December 6 there was an increase in the amount of discharge. A vulval smear again showed a large number of gram-negative diplococci, both intra- and extra-cellular, which were indistinguishable from gonococci; the latter, however, were never obtained in cultures.

At the end of her stay in hospital the child developed a high temperature which persisted from December 30 to January 20. No cause was discovered for it, but she was found to be very anaemic. A blood transfusion given on January 18 produced a miraculous improvement in her condition and she was discharged five days later.

In addition to the local treatment of the eye sulphonamides were administered intensively by mouth. Sulphapyridine (3 gm. in 24 hours) was given at the onset of the conjunctivitis, and was replaced by sulphanilamide (6 gm. in 48 hours)—when the conjunctivitis was proved to be streptococcal. Two courses of sulphathiazole were given as a remedy primarily for the attacks of vulvo-vaginitis—the first (35 gm. over 12 days) and the second (36 gm. in 8 days). Finally 18 gm. sulphanilamide was given over $4\frac{1}{2}$ days—during the pyrexial attack, January 12-16.

Both observers were satisfied with the valuable therapeutic effect of the sulphonamides, particularly in combating the severe conjunctivitis and in preventing the onset of panophthalmitis. The vulvitis was evidently more resistant to these drugs.

On February 17 the vision of the left eye had improved to 6/36 partly, and at a subsequent examination of the eye on April 19 she was found to have 6/24 vision in the left eye with a large degree of irregular corneal astigmatism, and no improvement with glasses. There was a slight opacity on the lower half of the cornea, and extensive vascularisation with very small vessels which invaded the cornea from the conjunctiva. The eye was white and appeared quite healthy.

Comment.—This case was considered particularly interesting in view of the fact that, apart from the support of bacteriological evidence, one would have concluded that the eye condition and the vaginal discharge were related, although it is rare for the gonococcus to give rise to a membranous conjunctivitis. If, however, the infection had been gonococcal it is almost certain that the cornea would not have withstood the infection and that panophthalmitis would have developed rapidly in spite of the excellent nursing attention which this case received. It is extremely rare for a streptococcal conjunctivitis to set up such a thick membrane, and still more unusual for it to be discharged from the eye as a complete cast.

Our thanks are due to Dr. A. Massey, Medical Officer of Health for the City of Coventry, for permission to publish this case.