Photographs of Scleral Cyst

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COMMUNICATIONS

EPITHELIAL CYST OF THE SCLERA

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ABERDEEN

IN the *Transactions of the Ophthalmological Society* for 1921, Goulden and Whiting published a case of epithelial cyst of the sclera. They were able to find only eleven similar cases in the literature. As these cysts are so unusual the following case, in which the clinical characters and microscopical appearances of the cyst indicate that it belongs to the same group, seems to be worth recording.

History of Case.—A healthy boy, aged 4 years, was brought to the hospital on account of a swelling on his left eye. According to the parents' account, a small part of the swelling had been noticed at the time of birth, but the main portion was not observed until two years later. There had been no difficulty at the time of his birth and there had been no known injury to the eye. The swelling caused no discomfort.

When examined on December 4, 1923, a blue raised area was present on the left eyeball adjoining the corneal margin at its nasal side. It measured 4.5 mm. in length, its long axis lying vertically, and 2.5 mm. in breadth. There was no congestion. A much smaller, blue, circular, slightly raised spot adjoining the nasal side of the larger swelling, had been noticed at birth, and had not altered in appearance. The larger swelling had been present for

two years. The other parts of this eye presented nothing unusual. The pupils were equal and contracted to light, and the fundi were normal. The larger swelling on the left eye gradually increased in size; by February 6, 1924, it measured 6 mm. in length and 3.5 mm. in breadth, and showed indications of lobulation. On palpation it felt firm and it did not move over the sclerotic with the conjunctiva. Two days later, the swelling was punctured when

Micro-photograph of section of Scleral Cyst $\times 100$

clear fluid escaped and both swellings collapsed, showing that they were connected. From the lower part of the cyst a small piece of the anterior wall was removed. By April 1, the swelling was again as large and presented the same appearance as formerly. It continued to enlarge, so that by July 5, it measured 15 mm. in length and overlapped the corneal margin. The photographs show the situation and lobulated character of the cyst, which was translucent and generally of a bluish appearance with yellow at the centre of the uppermost and of the lowermost parts of the swelling. Pressure on the cyst made no alteration in the depth of the anterior chamber or in the size of the cyst. On July 10, 4 minims of a clear faintly straw-coloured non-coagulable fluid

was drawn off from the cyst with a hypodermic syringe and transferred to a small sterilized glass tube. The cyst collapsed at all its parts. Two portions of the anterior wall, including the conjunctiva were excised, one from the upper part, the other from the lower part, and placed in 10 per cent. formalin. The interior of the cyst was quite smooth and resembled sclerotic. At its upper part a strabismus hook could be passed backwards for a distance

Micro-photograph of section of Scleral Cyst X300

of 5 or 6 mm. There was no communication with the anterior chamber. A transilluminator applied to the outer or lower part of the eyeball caused no red reflex at the site of the cyst. When the boy was seen again on August 31, 1925, there was no recurrence of the cyst.

The fluid from the cyst was examined by Dr. Charles Reid, Department of Physiology, Aberdeen University, to whom I am indebted for the following report: "slightly acid to litmus; alkaline to methyl red; neutral red turned orange (transitional colour); slightly acid to phenolphthalein; solid matter about 6 per cent.; organic solids 3—4 per cent.; inorganic solids 2—3 per cent.; protein present; some albumen and globulin; chlorides

present, definite reaction; phosphates, trace present; sulphates, doubtful, perhaps a very slight trace; urea present; sugar not present in measurable amount; cholesterol not present; blood pigment, examination by spectroscope failed to reveal absorption bands. On the whole, the composition of the fluid bears a definite resemblance to that of lymph." The fluid was sterile.

Microscopical examination of the cyst wall.—The interior of the cyst is lined by a stratified epithelium, which is clearly seen in both micro-photographs. The sections were stained by logwood and eosin or van Gieson's stain. Oval nuclei are seen arranged in several layers at some parts and in one or two layers at other parts. There is little or no indication of the cell wall. External to the epithelium is dense fibrous tissue forming a thick layer and containing some blood-vessels. This is separated by a looser tissue from the conjunctival epithelium. In sections stained by Weigert's elastic tissue stain numerous wavy dichotomous branching fibres are seen, mainly in the tissue between the dense fibrous tissue and the conjunctival epithelium. There is no trace of any foreign body, hairs or glands. As regards the aetiology of scleral cysts reference may be made to Goulden and Whiting's paper and to the discussion that followed it. In the present case the cyst appears to have been present at the time of birth.

The photographs of the present case were kindly taken by Dr. William Brown, and the micro-photographs of the sections by Dr. Alexander Low.

FREQUENCY OF METASTATIC CARCINOMA OF THE CHOROID

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IN Volume VII, 1923, of this journal an account is given of three cases of metastatic carcinoma of the choroid, one in a woman with mammary cancer and the other two in males. Reference is made there to the apparent infrequency of such cases, and of 107 cases collected from the literature and tabulated at that time the majority of cases, numbering 60, were single cases reported by 60 different observers. Fifteen other observers each recorded two cases, three other observers each reported three cases, and two others, Ginsberg and Fehr, have each recorded four cases. There is no record of five cases, or more, having been published by any one author. The conclusion, therefore, as judged by the number of reported