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them discrete and some coalescing. They were about \( \frac{1}{4} \) of an inch in thickness, bright-red in colour, like healthy granulations, and they varied from \( \frac{1}{4} \) of an inch to 2 inches in diameter. The pia mater was hyperemic in those areas, but apart from this, the convexity showed nothing abnormal. The brain weighed 2 lbs. 8 oz. At the base of the brain, in the position of the optic chiasma, and to some extent obscuring or replacing it, was a large mass of growth covered by pia mater.

The lungs both showed a condition of septic pneumonia. The mesenteric glands were enlarged, and the seat of metastases. In the centre of the right ovary there was a blood-clot, measuring five-sixteenths of an inch in diameter. This was surrounded by an area of new tissue forming a zone, three-sixteenths of an inch in thickness. The right Fallopian tube was normal, as were the left ovary and tube, and also the uterus and vagina. Protruding from the anterior aspect of the body of the second lumbar vertebra was an oval mass of growth, \( \frac{3}{4} \) inch by \( \frac{3}{4} \) inch, and projecting about \( \frac{3}{4} \) inch above the surface of the bone.

The secondary growths in the meninges and in the ovary (Fig. 5) were examined microscopically, and presented the characters of a small round-celled sarcoma, no neuroglial elements being recognisable.

Our thanks are due to Mr. Elmore W. Brewerton for his kind permission to publish this case.

REFERENCES.

2. Fehr.—Centralblatt für prak. Augenheilkunde, 1900, Bd. XXIV, S. 129.
4. Lieber.—Klinische Monatsblätter für Augenheilkunde, 1907, Bd. XIV, S. 270.
7. Owen.—Royal London Ophthalmic Hospital Reports, Vol. XVI.

TRANSLATION.

Traumatic Rupture of the Ciliary Arteries. (Rupture traumatique des artères ciliaires.) By MARIE HUGUENIN. La Clinique Ophtalmologique, février, 1916, reproduced from Revue Suisse de Médecine (no date given).

The article by Marie Huguenin, of Berne, deals with a subject apparently not well known in this country. On that account it is proposed to make what practically amounts to a translation of parts of the article, in spite of the fact that it is already at second-hand, so to speak.

Siegrist, of Berne, in 1895 gave the first description of traumatic
rupture of the ciliary arteries and consecutive fundus alterations. He published four observations. Two cases have since been described by Birkhauser and three by Hirsch. Thus, with the two here described by Huguenin, eleven cases altogether are comprised. The authoress, after describing her own cases, summarises those of the other writers and then discusses the whole group. It is clear, however, that in order to obtain a complete grasp of the cases and of the opinions of their recorders, reference to the originals is necessary.

We shall here transcribe the major part of Huguenin's description of her own cases and of her disquisition on the group, but not the synopsis of the cases of other writers. It is but right to say that both these cases are from the public or private clinic of Siegrist.

Case 1.—M. W. H. on the 20th May, 1913, was struck by a stone on the left eye. Dr. Stern, of Thoune, saw the patient the same day, and recorded that the eyelids on the injured side were moderately swollen and red. In the middle of the left upper lid there was a little superficial excoriation of the skin. Slight conjunctival irritation. On the nasal side there was a large subconjunctival haemorrhage. The cornea stained green with fluorescein in different parts of the nasal region. No perforating wound was to be seen. The anterior chamber was normal. No other pathological findings in the rest of the eyeball. On the 26th May, Dr. Stern first made a precise examination as to the vision. There was now no irritation of the eye. Cornea was normal. The iris looked normal. Pupil a little larger than that of the right side, and somewhat sluggish in reaction. The lens and vitreous were quite transparent, and tension was normal. Central vision was equivalent to fingers at 30 cms., with good projection. On examining the fundus, Dr. Stern found a normal disc with a physiological excavation. The remainder of the fundus was normal except in the region of the macula. The whole of the latter was included in a deep red spot. Subconjunctival injections of 4 per cent. sodium chloride were begun, and by June 18th vision had improved to counting fingers at 2½ metres. After this, Siegrist saw the patient. He found a characteristic round hole in the macula with several yellowish points in the centre. In the region of this hole the fundus was deep red, and presented a refraction different from the remainder. But what was most interesting was a map-like patch surrounding the macula and presenting a yellowish decolouration.* This patch was scattered over with pigment grains. The picture presented was exactly that of traumatic rupture of a ciliary artery, as described by Siegrist. The only difference lay in the presence of a macular hole,

* The French word is décoloration, which appears to mean either "discoloured," or "faded," "robbed of colour." The most literal translation is here adopted.—TRANSLATOR.
TRANSLATION.

not hitherto observed in these cases. Vision did not improve much afterwards.

Case 2.—Lucie R., aged 16 years, came to the Berne eye clinic in January, 1914. In September, 1913, while walking in the street, she was struck on the right eye by a stone, thrown from a distance of 20 metres by her young brother. Immediately afterwards, the patient found that the vision was hazy, and the eyelids became red and swollen. The swelling soon disappeared, but an ecchymosis persisted for some time. The patient did not consult a doctor. When she was able to open the eyelids, the eye was neither red nor painful. There was no photophobia, but the vision remained hazy. There was slight improvement in the following weeks. Eventually, four months after the accident, she came to the Berne eye clinic. Her personal and family history was good. She had always had good sight prior to the accident. She was a strong well-developed girl. Examination of the internal organs revealed nothing worthy of remark. The cornea and anterior chamber seemed normal. The iris presented a slight radial tear in the upper part, starting from the pupil margin and involving only a portion of the iris. Pupil wide, reaction very slow and of small range. Media transparent. Fundus examination:—Disc well defined, a little pale at the temporal side. Vessels normal. On the temporal side of the disc and commencing at its border, there is a map-like patch 2 P.D. wide and running directly towards the macular region. This patch is well-defined and presents a yellowish decolouration. It is scattered over with fine grains of pigment. Perimetricaly, slight restriction of the outer limits for white and colours. Considerable central scotoma for white and colours.

[At this point in the original paper we have a synopsis of the 4 cases reported previously by Siegrist, the 2 cases by Birkhauser, and the 3 cases by Hirsch. Then follows the “discussion” by the authoress, most of which we translate.]

These 11 cases have a similar ætiology. In all of them we have to do with a traumatism by a blunt object (stone, wood), not, as a rule, causing any laceration of the tissues, but merely contusion or slight excoriation. As a matter of fact, in 6 of the cases there was no wound at all, merely ecchymosis and swelling. In 1 case there was a small excoriation of the skin of the eyelids, while 4 cases only presented more or less severe wounds of the eyelids. The eyeball thus suffered very little externally. In all the cases there was ocular injection, usually of a mixed type, but very moderate in character and usually disappearing in a few days. In a few cases excoriations of the corneal epithelium occurred. Tear of the iris was seen in 2 cases and in 2 the iris was tremulous. In most cases the wounding object came from some distance away, and the trauma was of the upper lid.
In almost all the cases the pupil of the injured side was wide and motionless. In 1 case it was contracted. Pupil dilatation and immobility persisted for a long time, and sometimes did not completely disappear. In some cases there was blood in the anterior chamber, in the vitreous, and also discoloration of the iris. Pain has never been a pronounced feature, nor did it last long. The visual defect is immediate. In each case the patient, almost immediately after the injury, noticed pronounced diminution of vision in the injured eye. As a rule, the patient did not seek advice until some time after the accident, because at the beginning he or she did not realize the importance of the visual loss, and was impressed only by its long duration.

In the ten cases in which ophthalmoscopic examination was possible, the fundus lesions were identical, with small peculiarities in each individual case. The rapid appearance after the injury of irregular, map-like decolourized patches, with sharply defined contours, situated in the neighbourhood of the disc and usually starting from the edge of the latter, has been a feature in each one of these cases. In every case, as time went on, there occurred a blackish pigmentation of the decolourized patches. At the beginning the pigment appeared in the form of fine grains, but after some time, it became heaped up into more or less pronounced groupings, with a tendency to migrate towards the edges of the patch. Choroidal tear was seen in one case.

In two cases there was a hæmorrhage in the macula region, and in four cases striations in the form of a demi-corona around the macula. (The literal translation of mi-couronne would seem to be "half-crown," but this is clearly impossible in English!) In one case only there was a hole in the macula, and on this occasion the decolourized patch did not start from the papilla, but surrounded the macula.

In most cases there was no improvement in the vision with time. It remained stationary, or even in some cases deteriorated.

The authoress next refers to the experiments of Wagenmann in dividing a posterior ciliary vessel in the eye of the rabbit. After section of a long posterior ciliary artery, Wagenmann observed the following facts.—Half an hour after the operation, the appearance of a hazy patch in the fundus. This hazy patch disappears after two or three days, and in two or three weeks results in a yellowish decolouration and in a pigmentation which extends to the periphery of the fundus. It has thus been demonstrated by these experiments that as a result of section of a long ciliary artery, almost half the choroid becomes anæmic, and that after several days a part of this territory refills with blood. As a result of the temporary anæmia, there is a rapid degeneration of the retina with secondary pigmentation.
If the short posterior ciliary arteries are divided, the patch of fundus concerned starts from the superior or inferior border of the disc and extends towards the periphery. This is what happened in Wagenmann's experiments on the rabbit.

Huguenin continues.—In eight of our cases the altered patch starts from the lateral edge of the disc. In one of Birkhauser's cases the affected portion was at the superior disc edge.

According to Siegrist, one cannot deny that causes other than laceration of a ciliary artery can produce the ophthalmoscopic appearances above described, as, for instance, a choroidal or sub-choroidal haemorrhage resulting from lesions of the choroidal vessels. Such haemorrhages naturally influence the choroidal circulation and may produce secondary degeneration in the outer layers of the retina. Sudden flattening of the globe from before backwards by a blow from a blunt object may bring about these choroidal haemorrhages. At any rate, the specific affection under consideration is due to circulatory trouble of the choroid.

Ernest Thomson.

ABSTRACTS.

I.—OPHTHALMIA NEONATORUM.


This is an admirable review of ophthalmia neonatorum, with particular reference to its prevention in the United States, by George H. Thompson, of North Adams, Mass. It deserves to be read in the original.

Thompson espouses the view of those who attempt to explain the mildness of gonococcal ophthalmia in the infant as contrasted with its severity in the adult by supposing that the mother confers a strong degree of immunity upon the child. He does not agree with the other view (Theobald), according to which the mild disease in the infant is due to the fact that the infection has long lain dormant until roused into activity, whereas in the adult it occurs at the height of an attack of acute urethritis, when the infective powers of the micro-organism are presumably greatest. The author regards cases which occur before the second day after birth as due to intra-uterine infection, and those after the tenth day, to secondary infection. His views as to the pathogeny of corneal ulceration