Pseudoglioma / by John B. Story.

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PSEUDOGLIOMA.ª

The case which I have the honour to bring before the Pathological Section of the Academy of Medicine, is one of those extremely interesting ones where difficulty is frequently experienced in establishing the differential diagnosis between a retinal glioma and a fibro-plastic or puroplastic inflammation in the interior of the eyeball. The opinions of authorities differ as to the extent of this difficulty, but all admit that it exists, from Virchow, who stated in 1864 that no sharp line of demarcation exists between glioma retinæ and inflammatory growths in the same tissue, to Hirschberg, who admits that in some cases the diagnosis must remain, temporarily at least, uncertain.

If the patient comes under observation while the media are still clear, the diagnosis is not exposed to the same difficulties as when the lens is opaque and the pupil occluded with an exudation which even in true cases of glioma may be of a simple inflammatory character. During this period the wide pupil, the metallic yellowish reflex from the fundus oculi, and the knobby hillocks rising from the probably detached retina point to the presence of glioma, which the occurence of iritis, with a contracted pupil, and synechia, and the appearance of a duller whitish reflection from the fundus, indicate the more probable existence of plastic or suppurative choroiditis. The tension, too, is of help, being generally above normal in glioma, and subnormal in the inflammatory affection. None of these rules, however, can be regarded as absolutely invariable. Later on membranous opacities in the vitreous may be a source of confusion, in addition to the presence of cataract, opacity in the cornea, and changes in the anterior chamber, but these are generally late occurrences in the growth of a glioma, and the tension is generally sufficiently abnormal in such cases to enable

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^{*} Read in the Pathological Section, November 30, 1883.

the diagnosis to be made with approximative certainty. In spite of all that has been written since, we are still mainly dependent upon the principles laid down by the late von Græfe to differentiate retinal glioma from inflammatory choroidal exudations. Whether the latter be due to cerebro-spinal meningitis or other less well-established causes of such inflammations, the anterior chamber is usually shallow, the iris discoloured and disorganised, the pupil of variable size (not widely dilated as is common in glioma), and adherent to the anterior lens capsule; and the reflection from the fundus is of a more dull whitish yellow than in glioma. The tension, too, is mostly subnormal, and data are usually present in the history of the case and its clinical features pointing to the existence of some inflammatory affection.

My patient was a boy aged eight months, who was brought to me in March, 1883. [Mrs. C.'s baby, p. 236. Case Book C.] He had been vaccinated at the age of two months without unusual sequelæ, and had had neither measles, whooping-cough, nor any of the usual or unusual diseases of children, having been, in fact, in perfect health until shortly before he came under my observation. The first thing noticed to be wrong with him was that he kept his eyes constantly closed, after which he became peevish and fretful, and lost appetite. A slight discharge, too, was observed to come from the eyes; and Dr. Gibson, of Clontarf, who was called in to attend the child, finding that this discharge did not yield to treatment, sent the patient on to me. I should mention that he had also some cutaneous spots on his arm, hip, and knee, which his mother said did not resemble boils, but were more like "smallpox." They were "black, and after the black scab came away a small hole was left, which soon healed." I found three depressed bluish cicatrices at the places mentioned.

On first seeing the case I considered it to be one of simple catarrhal ophthalmia of very considerable severity, but somewhat abnormal in character, the subjective symptoms being out of proportion to the physical signs. The lids, though tightly closed, were but very slightly reddened or swollen, and the discharge from the mucous membrane was not abundant, and was purely

mucous in character. The ocular conjunctiva was but little, if at all, affected; but owing to the restlessness and excitement of the baby it was difficult to be very positive upon the point.

Though far from suspecting at this time the gravity of the case, I thought it from the first an extremely serious one in consequence of the condition of the right cornea, which presented in its centre a yellowish white infiltration, resembling an abscess so strongly that I entered the diagnosis, abscessus corneæ, with a note of interrogation after it, in my Case Book. This, of course, prevented my seeing the condition of the pupil. I considered the exudation at the time as situated in the cornea; but it is, I believe now, not impossible that it may have been in the anterior chamber merely in contact with the posterior surface of the cornea, and not in its tissue. A perfectly thorough examination in cases like this is often a matter of extreme difficulty, as we all know there are maternal obstructions to overcome besides those on the part of the little patient. I prescribed an astringent lotion, and an ointment of atropia and the vellow oxide of mercury, and did not see the child for some days subsequently. At the next visit, my notes of which are unfortunately without date, I found the ophthalmia and mucous discharge almost cured in both eyes, but the iris of the right eye was discoloured and greenish, and showed absolutely no signs of the action of atropia, while the pupil of the left eye was fully dilated. There was no corneal infiltration visible, but the pupillary area was filled with a yellowish exudation which projected slightly into the anterior chamber.

On the 22nd of March I saw the child in consultation with Dr. Gibson, and the diagnosis we determined on was "plastic irido-choroiditis." At no time, owing to the struggles of the child, and the soft swollen condition of the lids, could I satisfy myself as to the condition of the intraocular tension in either eye.

After this I, unfortunately, was confined to bed, and my friend, Dr. Arthur Benson, examined the child for me on March 29th, when he made the following note:—"Lids intensely swollen, proptosis, chemosis, some discharge, no anterior chamber, seems like panopthalmitis or some acute orbital suppuration coming on." I

then advised enucleation, which Dr. Benson performed on the next day, assisted by Dr. Gibson. As much of the optic nerve as possible was removed with the globe, for, although we all believed the case to be one of inflammation, the possibility of malignant disease could not be excluded, and we thought it right to act on the supposition that it might be present. Dr. Benson found great difficulty in removing the posterior half of the globe from the adjacent structures, and excised a piece of tissue, about the size of an almond, which was adherent to the posterior pole of the globe, and seemed to grow from or in the sheath of the optic nerve. This piece of tissue resembled fat in appearance, and was very vascular. The section of the nerve was apparently healthy. I have not noted the size of the globe. The cornea was clear, the lens partly so, the anterior chamber obliterated, and the pupil occluded. An equatorial section of the globe being made, the vitreous was found decayed into a yellow partly diffluent mass, resembling pus in external appearance, but probably containing more fibrous net-work, which kept it fixed in the globe when the latter was opened. At one side a small band of this matter lay in contact with the sclerotic, being separated from the rest of the disorganised vitreous by an intensely vascular creamcoloured band, of a crescentic shape, which evidently represented the thickened and inflamed retina.

The examination of the recent specimen with the microscope disclosed nothing but small sound granular cells in the vitreous. The tumour adherent to the optic nerve contained nothing but fat cells and fibrous tissue. After hardening in Müllers fluid and spirit, sections were cut and examined microscopically, with the following result:—Cornea healthy, except for an unusual separation of the fibres from each other, which was not especially well marked in the centre; Descemet's endothelium intact—it was almost in contact with cornea, but a space remained between them which was filled with an amorphous yellow substance, probably the embedding mass of celloidine; the iris tissue in a state of inflammation, as also that of the choroid, retina, ciliary body, and the sclerotic in the neighbourhood of Schlemm's canal; lens not implicated, but all round it, in the posterior chamber as well as in the vitreous masses

of small round granular cells, with nuclei, in which here and there one could detect the traces of fibrous tissue, and distinct signs of newly-formed blood-vessels. All the tissues above-mentioned as inflamed were much thickened as well as infiltrated with quantities of round cells, the nuclei of the tissue proper being also in a state of active proliferation. The almond-shaped tumour adherent to the optic nerve sheath was simple fat and fibrous tissue.

The child pined for a week or two after the operation, and then gradually recovered its health and spirits. I saw it last week prior to its emigration to America, and, except for the absence of the right eye, it was as fine a little child as one would wish to see.

