

Pelvic adhesions are more apt to give pain than are those situated in the abdomen. The diagnosis is frequently difficult, and must be made by exclusion. There are usually no very marked signs. There are apt to be some constipation, indigestion, and perhaps obstruction. In some cases it may be necessary to perform an exploratory operation.

The treatment consists in massage and the wearing of a flannel bandage; but if the pain is severe, an operation to free the adhesions will be necessary for its relief. Some authors state that the same condition is left after an operation, but this is not accepted by Nicaise, who advises the division of the offending band in every case with pronounced symptoms.

DERMOID CYST OF THE ANTERIOR MEDIASTINUM.

DARDIGNAC reports (*Revue de Chirurgie*, 1894, No. 9) the following case: A soldier, twenty-two years old, applied to the Hôtel-Dieu. On entering the military service a prominence of the right chest was noted. Auscultation was negative. It was observed that marching induced some difficulty in respiration. On rising in the morning there was a period of severe coughing, terminating in efforts at vomiting. Finally he was obliged to give up.

There was nothing in the family or personal history that seemed to bear upon the present condition. The whole right chest was enlarged. After three weeks of expectant treatment an aspirating needle was introduced to the depth of seven centimetres at the most prominent part of the swelling in the mammary line and 800 grammes of yellowish liquid withdrawn. An examination showed that the fluid was not purulent. Improvement followed at once, fever was absent, there was no spitting of blood—in short, no consecutive phenomena were to be noted. A second aspiration, ten days later, gave issue to 500 grammes of a fluid similar to the first. Again immediate and more marked improvement followed, which persisted.

Three years later he applied for treatment again, with a swelling of the right side of the chest, being most prominent in the mammary region. It was rounded and resisting. The symptoms improved somewhat by rest, but the general condition was much the same. An operation was performed for the relief of the condition. After excising six centimetres of the fourth rib an aspirator was introduced into the fluctuating portion, and a thick, turbid, greenish fluid was withdrawn, not containing pus or blood, but mixed with particles resembling grains of rice colored with saffron. It was impossible to tell whether the asc was intrapleural or extrapleural. Its capacity was estimated at 1800 grammes. Irrigation brought out some skin, hair, and sebaceous matter, proving the tumor to be a sebaceous cyst. To remove the cyst would have required an extensive costal resection, and as the asc-wall was adherent on all sides it was decided to attempt to secure the obliteration of the cavity by exciting an inflammation. For this purpose tincture of iodine was employed and iodoform-gauze introduced. The patient had a slow convalescence, attended with some fever. Four months after the operation a small retrocosto-sternal cavity persisted, with a fistula twelve to fourteen centimetres deep, which remained as long as the patient was under observation, although it decreased somewhat in its dimensions. The patient gained in weight and seemed in perfect health. The author has collected twenty three similar cases from literature.

OPHTHALMOLOGY.

 UNDER THE CHARGE OF

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 THE CEREBRAL VISUAL CENTRES.

Does there exist in the cerebral cortex a visual centre, constant in localization and well circumscribed? Where is it situated? What are its anatomic structure and physiologic functions? These are the questions discussed by Dr. S. E. HENSCHEN, of Upsala, in the *Revue Gén. d'Ophthalmol.*, 1894, No. 8. He points out that in spite of many researches these questions are not yet answered, and brings to hear upon them his own exhaustive and extremely valuable "Contributions to the Pathology of the Brain," of which the first half of Part III. has recently been issued.

Normal anatomy, he thinks, can never solve the problem, Which of the more or less uniform cerebral cells are endowed with the property of perceiving the impressions of light? The experiments of physiologists upon the lower animals have led to results too diverse to inspire confidence. There is no certainty of exactly similar localization and structure in the lower animals and man; while accurate observations, that are often impossible in patients lacking intelligence, are still more out of the question for brutes. Even the method of degeneration, accurate and valuable as it is, does not indicate the function of the parts involved, but only that they are intimately related. Thus, one of Henschén's cases, blind of leprosy for fifty years, showed complete destruction of the eyeballs and chiasm, and complete atrophy of the optic nerves and tracts, atrophy of the external geniculate bodies, pulvinar anterior corpora quadrigemina, the radiations of Gratiolet, and, besides, atrophy extending not only into the occipital lobe, but also into the parietal and temporal lobes. Certainly some of these atrophied fibres, though they have importance in the complex mechanism of vision, do not conduct the impressions of light to the visual centres. Their destruction alone would produce no blindness of a corresponding portion of the visual field. Only the anatomico-clinical method can guide our researches on the localization of the visual centre and its limits.

Applying this method to the questions under discussion, one must consider both the positive cases of hemianopsia and the negative cases as well. Having collected from medical literature all of these recorded with sufficient accuracy to throw light upon the subject, and having carefully analyzed and grouped them, he has arrived at the view that *the cortical visual centre is limited to the*

calcarine fissure. Whether it is only the posterior extremity of the fissure or portions in front of this that participate in the formation of the centre, it is now impossible to say. The occipital visual tract is situated in the inferior part of the optic radiations, and forms a fasciculus some millimetres to a centimetre thick. *Hemianopsia is produced only by a lesion of this fasciculus or of the calcarine cortex.* He has been unable to find a single well-observed case opposed to this view, although there are in medical literature some defective or badly described observations that seem to oppose it.

As to the supposed localization of this centre in the parietal lobe, Henschen points out that while numerous cases of lesions of this lobe have been accompanied with hemianopsia, many more cases of such lesions have existed without any such symptom. He gives diagrams of a number of these, in some of which the lesion was small, but in others it was very extensive. An analysis of these cases shows that the lesion of the parietal lobe causes hemianopsia only when it involves the visual fasciculus in the inferior portion of the optic radiations. The same applies to lesions of the precentral and of the temporal lobe. A great quantity of anatomico-clinical facts locate the visual centre in the occipital lobe.

The exact location of the centre in this lobe must be learned from cases described with great detail. Evidently the effects of a lesion will vary with the depth to which it extends in the white matter. The distinction must, therefore, be made between lesions involving the white matter and those confined to the cortex. Only the latter can indicate the exact localization of the centre in the lobe. It is noted, however, that in cortical lesions the fibres always suffer, so that the subcortical layer shows degeneration. Lesions strictly subcortical have, therefore, the same significance as cortical lesions.

As to the location of the centre on the lateral surface of the lobe, Henschen figures six cases of such lesions, in some cases bilateral, without hemianopsia or blindness. He knows of no published case in which lesions of the lateral surface not involving the optic radiations have caused blindness, except one where the depth of the lesion was not indicated. On the contrary, lesions of the median surface of the lobe produce hemianopsia even when limited to the cortex. Not all such lesions, however, cause it. He figures three cases, one with extensive and multiple lesions in which sight was preserved. In none of these was the cortex lining the calcarine fissure affected. He then figures sixteen cases of lesion of the median surface in which hemianopsia did occur. In some the lesions were limited, in some extensive, but all involved the walls of the calcarine fissure, or the visual fasciculus, the lower part of the optic radiations.

Bearing on the question of the limits of the visual centre, Henschen has recorded one case in which the lesion was limited to the cortex of the calcarine fissure and the hippocampus with hemianopsia. The lesion had been stationary several months, was a softening from thrombus, and the white substance was affected secondarily only to the depth of 1 or 2 millimetres. The patient was intelligent, and the visual field had been repeatedly taken by different observers. The microscopic examination was minute, and the case uncomplicated by lesions of the central ganglia. It is impossible at present to limit the centre more precisely than seems to be done by this case.

A point of peculiarity in the anatomical organization of this region is presented in the molecular layer of the cortex, which is here very thick.

Regarding the physiological organization of this centre, Henschen believes, in opposition to most other writers on the subject, that the centre for colors is coincident with that for light, although color-impressions may be perceived by particular cells or by a special layer. Cases are still lacking to decide fully this point. Henschen is also convinced that both the direct and the crossed fasciculi are represented in the cortex of the calcarine fissure, the cortical elements belonging to them being probably placed the one alongside the other. If the opposite theory of Munk, founded on experiments on the lower animals, were applicable to man, monocular hemianopsia would be certainly very common. Henschen knows of but two imperfectly observed cases, in one of which there was no autopsy, while in the other it was very incomplete.

Henschen proposes to designate as the cortical or cerebral retina that part of the cortex lining the calcarine fissure, to distinguish it from other portions of the cerebral cortex taking part in the act of vision, which might properly be included under the more general term visual centre. He thinks the question as to whether we can determine which part of this area represents the macula lutea and which the peripheral visual field, is to some extent answered by cases reported by Hun (this JOURNAL, January, 1887), by Wilbrand, and by two of his own. In one of the latter the right occipital lobe had been extensively disorganized, including the optic radiations, while the left presented nutritive disturbances and slight softening which rendered useless the cortex of the posterior two and a half centimetres of the calcarine fissure. Yet this patient could read fine print to the last days of her life, showing unimpaired vision at the macula. In another patient with bilateral lesions of the cuneus and destruction of the cortex of the posterior part of the fissure on the right side the central field was also preserved, showing that it did not depend on the cuneus.

The arrangement of the cerebral or cortical retina appears to be, with the macula anteriorly, the peripheral field in the horizontal meridian posteriorly, the upper lip of the fissure corresponding to the upper part of the retina (lower field), and the lower lip of the fissure to the lower part of the retina (upper field). Probably each half of each macula lutea is represented in both occipital lobes, and each quadrant—upper and lower—receives fibres through both the upper and lower parts of the optic radiations.

CAUSES OF FAILURE OF IRIDECTOMY TO RELIEVE GLAUCOMA.

E. NEACHER COLLINS, in his extensive experience as Curator to the Royal London Ophthalmic Hospital, found that by far the commonest cause (*Lancet*, No. 3721) of failure to relieve glaucoma by iridectomy was the non-removal of the iris up to its extreme periphery, so that a portion of it is left hocking up the filtration-area. In glaucoma of long standing the root of the iris becomes absolutely adherent to the cornea, and when drawn upon, instead of tearing at its junction with the ciliary body, tears at the point where it ceases to be adherent, so that the filtration-area never becomes opened up. On this account he urges the necessity of performing iridectomy early in chronic glaucoma. Another cause is adhesion of the lens-capsule to the wound, from