A CASE OF DISEASE OF THE PITUITARY, WITH SYMPTOMS REFERABLE TO THE THYROID AND OVARY (PLURIGLANDULAR SYNDROME).

By J. EASON, M.D., F.R.C.P.,
Physician, Leith Hospital.

WITH OPHTHALMOLOGICAL REPORT.

By J. V. PATERSON, M.B., F.R.C.S.,
Assistant Ophthalmic Surgeon, Royal Infirmary.

MRS. R., æt. 34, has complained of difficulty in vision since June 1906, otherwise she feels very well, and is always able for work. She states also that she has not menstruated since she was 28 years of age. She had scarlet fever at the age of 16. In the year 1905 she suffered severely from headaches, but after the removal of some decayed teeth in that year the headaches ceased. The difficulty of vision began a few weeks before she was married in 1906. Her family history is very good. There is no history of tuberculous disease in the family, nor is there any evidence of epilepsy. I formed the opinion that she had neither congenital nor acquired syphilis.

General Appearance.—She is of stout frame, and, for one of her years, is decidedly obese. Her weight is 11 st. 6 lbs.; she has gained 7 lbs. in weight within the last two years—principally in the later part of this period. Her waist circumference is 29½ inches, her circumference at the level of the umbilicus, 38 inches. The features are broad, the skin of the face pale and opaque, and on the nose the texture of the skin is coarse. The hands and feet are broad. The fingers somewhat resemble the sausage-shape of acromegaly. The hair of the head is long but slightly scanty. The axillary hair is distinctly less than normal, while the pubic hair is average. Perspiration seems subnormal, but only slightly; three years ago the sweat glands seemed much less active. There is no pigmentation of the skin of abnormal distribution.

The condition of the *alimentary system* appeared to be entirely normal.

Circulatory System.—Pulse 45. There is no œdema, dyspnœa, or faintness. She complains of flushings, during which the pulse becomes more frequent but soon again resumes its slow rate. When the patient is in bed the pulse-rate has sometimes been 40. The heart sounds are normal. Recently she has complained of mild Raynaud's symptoms, which are felt after a spell of knitting. The fingers then become cold.

Hæmopoietic System.—R.BC. 4,500,000; W.BC. 6000; Hb. 80-100 per cent. Films show some increase of lymphocytes. Under the left ear

there is a slightly enlarged gland. The thyroid gland is not palpable. There is no special dulness behind the manubrium nor any symptoms indicative of a large thymus.

Nervous System.—Her smell, taste, and hearing are good. The sensory system is normal. The knee-jerks are equal and normal; the Achilles jerk is present. Babinski's test is negative. Co-ordination is good. She has never suffered from vertigo, and there have been no headaches for several years.

A description of the ophthalmological condition is given by Dr. J. V. Paterson below.

Reproductive System.—She has had amenorrhœa for six years. The mammæ are well developed. She has had no pregnancies.

Urinary System.—The urine has been examined only on a few occasions and no abnormal constituents were found. The average amount of urine daily is 40 ozs.

Ophthalmological Report by Dr. J. V. Paterson.

Mrs. R. consulted me on 10th November 1906 regarding dimness of vision. On examination I found vision with the right eye equal to $\frac{6}{60}$ of Snellen's scale, while that of the left eye was distinctly worse. No definite improvement was procurable with lenses. The fundi appeared normal. The shadow test showed slight irregular astigmatism, but no noteworthy refractive error. The field of each eye was good to hand movements, but fingers were not counted so readily to the outer side of the fixation point. In the left eye a definite central scotoma was readily made out. By the use of a colour test it became at once evident that a complete loss of the colour field to the outer side existed in both eyes (see Charts). The field for white was also considerably reduced. The pupillary reactions were normal.

Dr. Eason discussed the case with me, and we both thought that there must be some lesion which was causing pressure on the visual fibres at the chiasma.

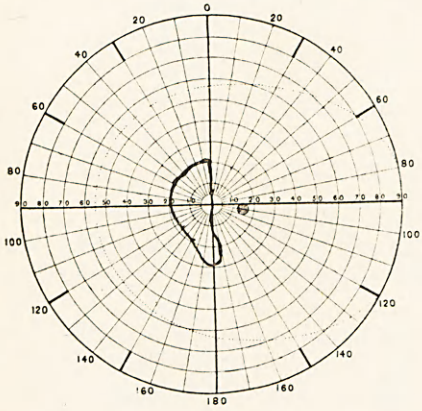
I saw the patient again on 4th June 1907, having had reports as to her condition in the interval. Vision by this time had greatly improved (RV $= \frac{6}{18}$, LV almost as good). The right disc appeared normal, the left very faintly blurred in outline and slightly pallid. The fields were charted for red and showed a symmetrical loss of the outer and upper quadrant, while in the lower outer quadrant the loss of colour perception was not quite complete.

On 24th May 1909 she consulted me again, complaining of double vision, which she said had existed for several months. Examination showed that she usually fixed with the left eye, the right diverging 4° or 5° according to the Maddox scale. The separation of the images was about the same in all directions of fixation, and I did not feel sure

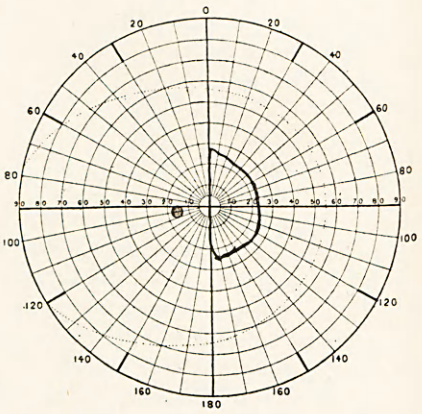
whether paresis of any individual muscle existed. The pupils were equal, and reacted normally. The right disc showed slight atrophic changes, while the left disc showed quite marked atrophy. Central vision had not appreciably deteriorated since her previous visit. Examination of the fields now showed loss of the temporal halves, even to hand movements. The defect, which had originally been a relative one, had now become absolute.

Charts showing field for red.

A
Right Eye



A
Left Eye



A short consideration of these imperfect notes will, I think, make it abundantly clear that in such a case as this the data obtained from the visual examination are of the highest value in indicating the seat of the disease. We have indeed before us a typical picture of the visual changes brought about by pressure on the chiasma, viz. impairment of central vision with bitemporal constriction of the visual fields, and accompanying these symptoms the visible signs of a slowly increasing optic nerve atrophy.

Notes on Progress.

For three consecutive months during July to October 1909 she had thyroid medication, and for a considerable part of this period she had three raw eggs daily; in November she stopped thyroid treatment, as her vision had become worse. She had ovarian tabloids, without any apparent change resulting. During two periods, each of some months' duration, potassium iodide has been given without benefit.

On 26th December 1909 pituitary tabloids, 2 grs. twice daily,

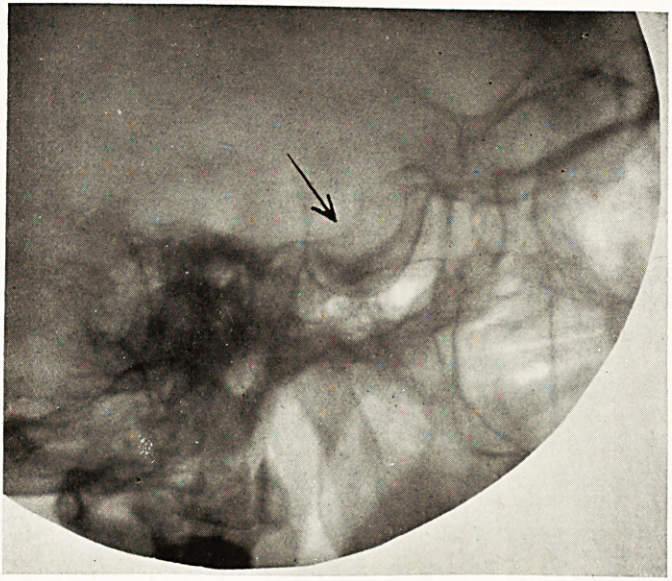


FIG. 1.

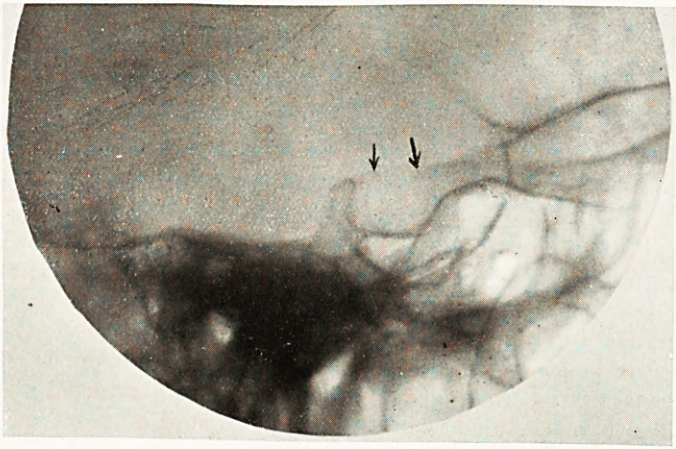


FIG. 2.
Illustrating Dr. EASON'S paper.

were prescribed, and on 13th January following she began to complain of being very drowsy at times, and the nasal field of vision on the left side was affected more than it had hitherto been. An apparent result of this treatment was that urine was voided more freely, and she required to get up at night to micturate. The average daily increase was about 10 ozs. She also increased in weight, although the gain was not entirely maintained towards the latter part of the period in which she was under this treatment. When the administration of pituitary extract was stopped on 13th February, the drowsiness passed off, and she was also able to see a little better. She no longer had need to get up at night to pass urine.

Remarks.—In this case the diagnosis of disease of the pituitary is based on the syndrome of bitemporal hemianopsia and amenorrhœa. These together suffice to distinguish an abnormal condition of the pituitary in which enlargement is a feature. The lengthy history of the case suggests hypertrophy or a benign tumour, and adenoma is by far the most common tumour of the pituitary. That enlargement of the pituitary has occurred is shown in the X-ray photograph of the wide sella turcica (Fig. 1) taken by Dr. Edmund Price. For purposes of comparison a photograph is also shown of the normal sella turcica (Fig. 2). The obesity, the characters of the skin, hair, face, hands, and feet, and the slowness of the pulse may be attributable to changes either in the pituitary or thyroid or in both. It has already been stated that the thyroid was not palpable. The case exemplifies one of the numerous pluriglandular syndromes described by Claude and Gougerot, as there are in Mrs. R.'s case not only indications of functional and organic changes of the pituitary, but also of atrophy and hypofunction of the thyroid and hypofunction of the ovaries. It is difficult to say which of these is primary, but the occurrence of amenorrhœa two years before the defect in vision was complained of is suggestive. One or two cases similar to the above have now been treated in France and Italy by X-rays, taking the mouth as the way of penetration to the pituitary. In one of these cases benefit to the vision and restoration of the fundal vessels to the normal occurred. After a relapse similar treatment had the same beneficial effect as formerly. The acromegalic signs were not influenced. In another case improvement is also recorded.

Operation is now recommended, the indication being severity of pressure symptoms. It is considered to be unjustifiable to operate for the acromegalic condition alone. In the case here recorded I have been hitherto unable to persuade the patient to submit to operation. Hochenegg, Exner, von Eiselsberg and others have successfully operated on similar cases, with relief to the intracranial symptoms and reduction of the hypervolume of the extremities.