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OPHTHALMOPLEGIA EXTERNA

COMPLICATING A

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CASE OF GRAVES' DISEASE.

BY

FRANCIS WARNER, M.D.,

ASSISTANT PHYSICIAN TO THE LONDON HOSPITAL AND TO THE EAST LONDON HOSPITAL FOR CHILDREN.

Read October 24th, 1882.

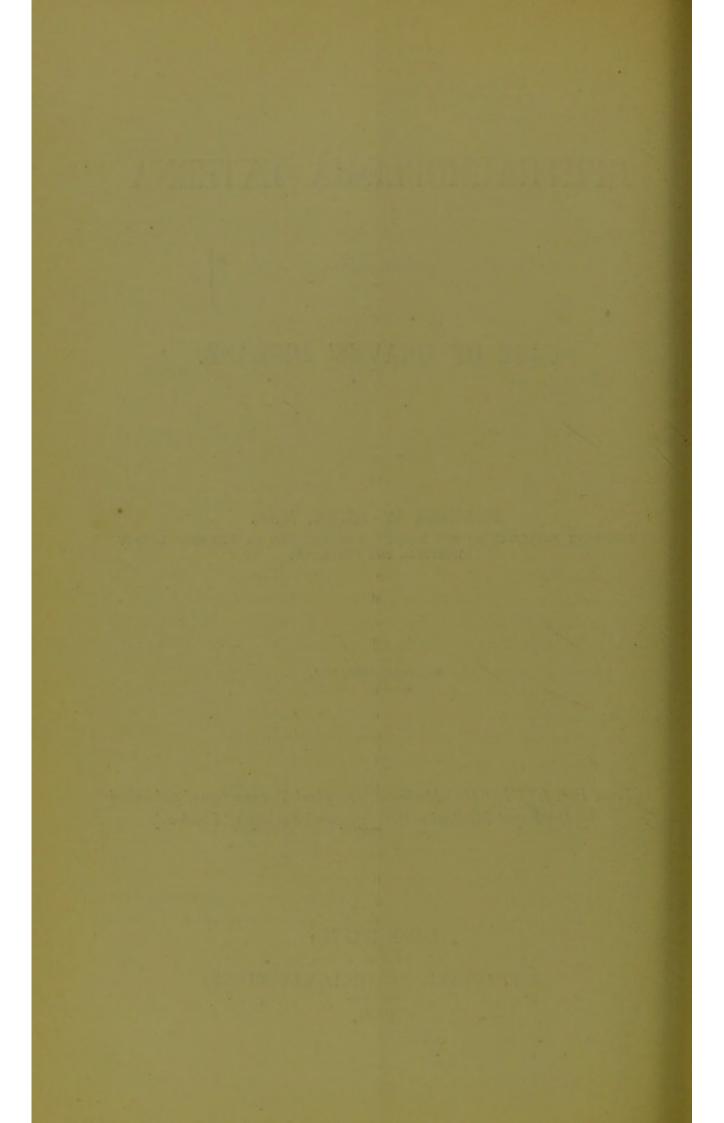
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COMPLICATING A CASE OF GRAVES' DISEASE.

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FRANCIS WARNER, M.D.,

ASSISTANT PHYSICIAN TO THE LONDON HOSPITAL AND TO THE EAST LONDON HOSPITAL FOR CHILDREN.

Received May 9th-Read October 24th, 1882.

Marion H—, æt. 25, was admitted into the London Hospital, March 22nd, 1881, with the signs of Graves' disease well marked. She enjoyed good health till February, 1877, when the catamenia became scanty. In November of that year she was admitted in-patient under Sir Andrew Clark for tonsillitis, and was then found to present exophthalmos with considerable enlargement of the thyroid, especially in the right lobe. In 1878 she was again an in-patient for Graves' disease, and was troubled with palpitation, dyspnæa, bronchitis, and slight blood spitting; the temperature sometimes rose as high as 103° F. without any inflammatory cause. During 1878-9 there were many attacks of dyspnæa, and she was often distressed by thirst and night sweating; during this period she grew stout but pale.

She continued as a hospital nurse, but suffered much from headache, vertigo, and palpitation, as well as from intercurrent attacks of diarrhœa; also the legs were often swollen. Menstruation was absent from November, 1880, to October, 1881, when it became re-established. She first suffered from temporary diplopia about January,

1880; this lasted only a few weeks, and entirely passed away as the general health improved. In November, 1880, she first began to notice that she had to turn her head to look at an object, being unable to move the eves properly. When admitted in-patient in March, 1881, she was excessively nervous, very excitable and irritable in temper; she was, therefore, at her own request kept in bed, almost in darkness, with screens around her. She complained of double vision and "flies before her eyes," which appeared to her so real that she attempted to catch them; she was also troubled with giddiness, thirst, constant picking of the lips, and palpitation, so strong that the whole body shook with the throes of the heart, accompanied with dyspnœa. The signs of Graves' disease were well marked, but not excessive; the usual complications-diarrhœa, tonsillitis, bronchitis, amenorrhœa, and headache-were very troublesome. The right lobe of the goitre was much larger than the left, and a souffle was heard over it; the circumference of the neck over the goitre was fourteen inches; there was no cardiac bruit.

To epitomise the symptoms which occurred during the seven months the patient was under observation: there were frequent attacks characterised by palpitation, dyspnœa, head pain, insomnia, and vomiting, frequently attended with pyrexia rising to 102° F., also gastric crises, marked by vomiting, diarrhea, epigastric tenderness, blood spitting, and thirst. During April she often complained of throbbing pain in the temples and palpitation with the gastric attacks, but these recurred less frequently and with less severity, so that towards the end of the month there was marked improvement, less dyspnœa, she was quieter, there was less irritability of temper, and more self control over language, &c., but she still required screens around her bed. The muscles of expression were found to be weakened on both sides, so that the face was very expressionless. When the patient laughed some irregularity in the movements of the mouth was detected, but there was no definite facial paralysis.

Early in April she was troubled with corneitis, attended with great photophobia, which attacked the left eye principally, and lasted nine days; a relapse of corneitis occurred in the right eye for five days, attended with a stye in the lower lid, each attack of corneitis being attended with "a gastric crisis."

Mr. James Adams kindly saw the patient with me, and we took the following note:—Diplopia, external strabismus (very slight), proptosis, traces of corneal ulceration. The movements of either eye were very deficient; in the right eye there was vertical movement through about 4°, but in the horizontal plane not more than 2°; it was also specially noted that the left eye, while it could move outwards, had no power of inward movement. The pupils were both sluggish in movement, but reacted to light and accommodation, the left acting better than the right. Either eye could read type J. 1 at six inches.

During May there were several gastric crises with severe headache. Examination for spinal symptoms showed the absence of the signs of ataxy, and the knee jerk was normal. As she lay in bed there was distinct tremor of the feet, increased by any mental excitement, and this remained constant. The legs were slightly cedematous. Pulsation in the thyroid diminished, and the general condition improved, but the goitre did not lessen in size. The condition of the eyes continued to distress the patient; there was great photophobia caused by ulceration of both corneæ, which occurred principally on their lower segments, and was probably due to exposure at night following upon the weakened condition of the facial muscles; there was proptosis, together with palsy of the fifth pair of nerves; the left eye again being the worst in extent of ulceration and amount of pain. Iced compresses were applied during the day, and a bandage at night; a leech placed behind the ear gave relief to the pain and conjunctivitis on that side.

During June the general comfort of the patient con-

siderably improved, the gastric crises stopped, but palpitation continued troublesome, the thyroid did not now visibly pulsate, and the carotids were not seen throbbing; the circumference of the neck over the goitre measured fourteen inches as before. Tactile and thermal sensibility were much lessened in the face, and they were blunted throughout the whole body; smell and taste were unimpaired. Œdema of the legs continued; an ulcer formed over the left internal malleolus, but healed in four days. Early in the month Mr. Couper examined the patient, and reported both fundi oculi normal, refraction myopic, no spontaneous pulsation in the retinal vessels: partial double ptosis, and some divergent strabismus with diplopia. There was some feeble movement of the eyes, but the condition approached almost complete double ophthalmoplegia externa, though in neither eye was the movement in any direction completely lost; conjunctivitis continued, but was less intense; photophobia was troublesome. The double ptosis increased till the palpebral fissure was not more than three lines; the eyeballs were anæsthetic, so that the patient could only just perceive a touch upon either cornea. There was no convergence for near vision.

In July the gastric crises returned with delirium at night; there was some general muscular weakness, and the paresis was so marked in the masticatory muscles that the patient could not bite one's finger so as to hurt it; the tremor of the feet continued. At the middle of the month Litres' cold irrigator was applied to the head and the goitre, with very good results; in a fortnight the proptosis had diminished, and the goitre was lessened, so that the circumference of the neck had fallen from fourteen to thirteen inches. As to the eyes there was distinctly some power of movement upwards and downwards, but none in the horizontal direction. From the end of July till the time of her discharge in November the general health greatly improved, she gained in weight and in strength, the diarrhæa ceased, the headaches,

gastric crises, and rises of temperature became infrequent and very transitory.

In August she was ordered as follows:

B. Liq. Hydrarg. Perchlor., 5ss; Potass. Iodid., gr. v; Tr. Card. co., 3j; Aquæ ad 3j, ter d. s.

Slight mercurialism followed. The iodide was increased to gr. xv, and this was continued till the end of August, when she was ordered a simple tonic. There appeared to be no evidence of the presence of syphilis. Menstruation returned in September, and has continued regular since; it had been absent for eleven months. The goitre entirely disappeared, the circumference of the neck falling from fourteen to twelve inches and a half.

In January, 1882, Mr. Tweedy kindly examined the patient and reported:—"Pupils fairly active and in a state of medium dilatation, both eyeballs prominent, especially the left, the right the better sighted. On the left cornea at its lowest part is a linear horizontal scar corresponding to the palpebral fissure; the pupillary edge of the iris is jagged at the inner part, especially above. Just opposite the upper and inner edge is a clot of uvea on the anterior capsule of the lens, the remains of old iritis. Optic discs and fundi normal. Very little movement of the globes, rather more in the vertical direction than in the horizontal; the left eye moves a little more than the right."

In this case the immobility of the eyes was never absolute in any direction, and the limitation of the range of movements was not equal in all directions. Reasons for thinking the paralysis of the ocular muscles central and not local in certain nerves are as follows: the average symmetry of the lesion, paralysis of the third, fourth, and sixth pairs of nerves would not account for the greater limitation of the movements in horizontal as compared with the vertical planes.

The symptoms and pathological signs in this case may be classified as those dependent upon the Graves' disease, its complications, and the ophthalmoplegia externa; in the former group may be placed the exophthalmos, goitre, palpitation with gastric crises, headaches, and dyspnæa, then the general mental excitement, vertigo, tremor of the lower extremities, weakness of the fifth and seventh pairs of nerves, with general reduction of sensibility.

In most points this case corresponds with Mr. Hutchinson's description of ophthalmoplegia externa given in vol. lxii of the 'Transactions.' Agreement is seen in the double ptosis, a want of exact correspondence in the conditions of mobility of the two eyes, the paresis of the fifth pair of nerves, and the good vision. In six of Mr. Hutchinson's cases the lower extremities were weak, with a condition more or less approaching ataxy. In this case there was tremor of the feet without defect in walking. Two of Mr. Hutchinson's cases presented the one, insanity, the other, violent mental excitement; in the case narrated the mental excitability was marked. A difference is found in bilateral weakness of the muscles of the face.

It is noteworthy that the two eyes were not equally affected with loss of mobility; this seems to strengthen the probability that there is a nerve centre governing the movements of each eye. On this point additional evidence is seen in cases where nystagmus affects the two eyes unequally; also in the independent movements of either eye seen in infants in deep sleep, and in adults in coma from chloroform.\(^1\) Again, the greater limitation of movements in the horizontal, as compared with the vertical plane, seems to give evidence of the greater paralysis of the nerve centre governing the horizontal movements, as compared with the degree of paralysis of the centre governing vertical movements. In the normal condition horizontal movements of the eyes are probably the most frequent, and these movements were the most paralysed.

¹ See paper on "Loss of Associated Movements of the Eyes under Chloroform and in Disease," 'Brit. Med. Journal,' March 10th, 1877.