3. It cannot yet be considered to be a cure for *late* cases, though definitely ameliorating the patient's condition and restoring normal life for some months.

4. Late cases should be kept under compulsory control—for example, in some prison lines—with examination of the cerebro-spinal fluid.

In conclusion, I must add that I have also made a trial of tryparsamide, a supply of which drug was furnished in October, through the principal medical officer, by the Rockefeller Foundation. A similar series of six cases was selected, but was unfortunately broken up, after three injections, by five of the cases running away after a spinal puncture for cerebro-spinal fluid examination of one case. This misfortune points to the need of careful, plodding preparation before making any further attempt at spinal puncture, or else putting some cases aside for the purpose, but not in the same area. Each case, however, had improved remarkably and seemed completely free from the disease.

Three cases have now been under observation for over three months, apparently completely cured. No reaction or toxic effects were noticed after the tryparsamide injections.

The results are difficult to compare with the "205" results. However, the clinical impression left on my mind is that tryparsamide is equal, if not superior, to "Bayer 205" in the treatment of sleeping sickness, and is easier to work. I intend to use the tryparsamide as a routine, as long as the supply lasts.

I am indebted to the Principal Medical Officer, Uganda, for permission to publish these notes.

TEN CASES OF ACUTE RETROBULBAR NEURITIS.

BY

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DURING the last six months an unusually large number of cases of acute retrobulbar neuritis were admitted to the ophthalmic ward of St. Bartholomew's Hospital. These cases are of interest inasmuch as in no one of them was any satisfactory cause of the condition found, and in all but two there was rapid recovery of vision.

There are a certain number of cases in which the cause is clear, such as disseminated sclerosis, diabetes, and various toxic conditions; but reference to writers on the subject shows the frequent occurrence of cases in which the cause is unknown. A very large list of diseases held responsible has been compiled; this includes rheumatism, gout, dysentery, intestinal stasis, tubercle, syphilis, sinusitis, septic tonsils, typhoid, and many others. Sphenoidal sinusitis has been blamed for a great many cases, and the sinus drained, with subsequent rapid improvement of vision. This, however, is the normal course of events in a majority of cases, and therefore not necessarily a result of the operation. Mr. Foster Moore states that he has never seen a case of retrobulbar neuritis that he was satisfied was due to paranasal sinusitis.¹ All these cases, accompanied by skiagrams and x-ray reports, were examined, with negative results, by Mr. Rose in the throat and nose department of the hospital.

The outstanding features of the condition are rapid loss of central vision with neuralgic pain in the eyeball, made worse by movement of the globe or pressure of it back into the orbit; impairment of the activity of the pupil to light; absence of gross disc changes; and a tendency to rapid recovery. The following is a short summary of each case.

Case 1.—A woman, aged 27. Noticed pain in the right eye, followed a week later by defective vision in the same eye. Vision: right, 6/60; left, 6/9. The right pupil reaction was sluggish. The peripheral fields were complete, but there was a small central scotoma in the right field. The edges of the right optic disc were not well defined, but the fundi were otherwise normal in appearance. The Wassermann reaction was negative. There was no evidence of any sinusitis. Dr. Hinds Howell reported the absence of signs of organic disease of the nervous system apart from the optic nerve. After eight weeks the vision was 6/9.

Case 2.—A woman, aged 20. Pain in the right eye, followed a week later by defective vision. For one year she has had a twitching of the left side of the face and neck. Vision: right, 6/12; left, 6/9. She complained of tenderness of the right eye. The reaction of the right pupil was sluggish. The peripheral fields were complete, but there was a relative scotoma in the lower temporal region of the right field. The fundi were of natural appearance. It was reported that there was no manifest sinusitis. Dr. Hinds Howell found no evidence of insular sclerosis. Eight weeks later the vision was 6/6.

Case 3.—A woman, aged 26. Left eye became misty two weeks before admission. Three weeks previously she had had pleurisy. Vision: right, 6/6; left, counts fingers at one metre. The left pupil was inactive to light. The visual fields were complete. The edges of the left disc were blurred, but the fundi were otherwise of natural appearance. No evidence of manifest sinusitis was found. There was no organic disease of the nervous system. Six days after admission the vision was 6/6.

Case 4.—A woman, aged 32. Frontal headache and pain in the right eye, followed nine days later by failure of vision of the same eye. Vision: right, 6/12; left, 6/6. Both pupils were active to light. There was a general contraction of the peripheral field, and a small central scotoma. There was optic neuritis, but no haemorrhages and no exudates. The left fundus was of natural appearance. Mr. Rose reported that clinical examination did not arouse suspicion of sinusitis. There was no evidence of organic disease of the nervous system. Seven weeks later the vision was 6/9.

Case 5.—A woman, aged 20. Sudden fogging of vision and pain on touching the eyes. Vision: right, 6/24; left, 6/36. The right pupil was active, but the action of the left pupil was sluggish. The visual fields were complete. Both optic discs were swollen, the left more than the right. The Wassermann reaction was negative. Nothing abnormal was discovered in the central nervous system, and there was no sinusitis. Eighteen days later the vision was much improved: right, 6/12; left, 6/6.

Case 6.—A woman, aged 40. Right eye became misty three weeks before admission to hospital. No pain was noticed at any time. Vision: right, large moving objects; left, 6/6. The right pupil did not react directly to light, but reacted consensually. There was loss of the nasal half of the right field and of the inferior temporal segment of the left field. The fundi were of natural appearance. The Wassermann reaction was described as border-line. Mr. Rose reported that there was a small polyp in the left nostril, and he believed there was ethmoiditis on the left side, but he could find no evidence of it on the right side. There was no evidence of organic nervous disease. The vision was not improved one month later.

Case 7.—A woman, aged 22. Impaired vision of the right eye, and pain in the same eye on looking to the left. Vision: right, less than 6/60; left, 6/12. Both pupils were active. The peripheral fields were full, but there was a central scotoma in the right field. In the right fundus great tortuosity of the vessels and distension of the veins was to be seen. The disc was surrounded by small haemorrhages. The left fundus showed the same condition of the arteries and the veins, but no haemorrhages were to be seen. No sinusitis or organic nervous disease was to be seen. Three weeks later the vision was 6/24.

Case 8.—A woman, aged 24. Pain in the right eye, which became worse on looking to the left. Vision: right, less than 6/60; left, 6/6. Both pupils were active. There was a central scotoma in the right field, but no contraction of the peripheral fields. The right optic disc was swollen, and there were haemorrhages in the fundus. The left fundus was of natural appearance. The Wassermann reaction was negative. Mr. Rose reported that there was no sinusitis. Dr. Hinds Howell found no evidence of insular sclerosis, nor of any lesion in the nervous system beyond the papilloedema. Four weeks later there was no swelling of the disc and no haemorrhages, but the vision was not improved.

Case 9.—A man, aged 39. Pain on looking to the left, followed two weeks later by failure of vision, especially of the left eye. Vision: right, 6/36; left, perception of light. Both pupils were active. There was some contraction of the nasal part of the right visual field. The right fundus was of natural appearance. There was some swelling of the left optic disc, but no haemorrhages. The Wassermann reaction was negative. There were two septic teeth in the lower jaw. Mr. Rose reported no manifest sinusitis. There was no disease of the nervous system. Three weeks later the vision was: right, 6/9; left, 6/24.

Case 10.—A man, aged 43. Pain on movement and failure of vision in the left eye. Vision: right, 6/6; left, less than 6/60. Both pupils were active. There was a general contraction of the left visual field. The left disc was slightly swollen, and one haemorrhage was to be seen. The Wassermann reaction was negative. There was no sinusitis and no evidence of organic disease of the nervous system. Four weeks later the vision was 6/36.

Diagnosis.

Although in one or two of the cases the diagnosis was reached by a process of exclusion, it may in general be accepted as correct. In all but two of the cases there was pain as well as defective vision. In four this pain was made worse on movement of or pressure on the globe. A scotoma was found in five of the cases, and in four there was some peripheral contraction of the field of vision. In five cases there were marked pathological changes in the disc. In five of the cases the activity of the pupil was

impaired, and in the remaining five the contraction was not maintained.

Cause.

Although all the reputed causes mentioned at the beginning cannot be excluded with certainty, there is no positive reason for thinking that any one of them was responsible. The most important cause to be considered is disseminated sclerosis, and in these cases careful examination failed to reveal any sign of the disease at the present time. Cases have, however, been reported where retrobulbar neuritis has been the first and only sign of the disease, and other manifestations have only come to light so long as ten years or more afterwards.

Neither tubercle nor syphilis requires serious consideration, and in this series in all but one case, which was described as doubtful, the Wassermann reaction was negative.

The controversial question in a group of cases of this sort is that of paranasal sinusitis. As already stated, many cases have been operated on by rhinologists and the sphenoidal sinus drained, with subsequent rapid improvement of sight, but that this is in most cases the normal course of events is not realized. Consequently, an improvement which may be none other than the ordinary course of progress of the disease has been attributed to the operation. As already stated, thorough examination of the air sinuses was carried out in all these cases, and no evidence of any infection was revealed.

This series of cases seems to demonstrate the existence of a group of cases of acute retrobulbar neuritis, which have no demonstrable cause, and which are certainly not due to sinusitis. There is no doubt that a considerable proportion of them will ultimately reveal themselves as cases of disseminated sclerosis.

I am indebted to Mr. Foster Moore for his assistance with these notes, and for permission to publish the cases.

REFERENCE

¹ *Medical Ophthalmology*, second edition, p. 166.

DIATHERMY IN THE TREATMENT OF PROSTATIC OBSTRUCTION.

BY

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THE idea of burrowing a channel through the prostate in cases of obstruction to the outflow of urine is probably as old as the hills. In more modern times it was recommended by John Hunter. In 1834 Guthrie invented a catheter containing a concealed blade for dividing the bar at the neck of the bladder; and in 1876 Bottini of Pavia introduced his galvano-cautery incisor with the aim of preventing haemorrhage. In spite, however, of opportunities that were only too numerous, the one method which was regarded as of any value at the end of the last century was the passage of a full size metal bougie, which was retained in the urethra for a few minutes. When the more modern methods of perurethral treatment are considered it should be remembered that a certain amount of relief was thus obtained. When more precise instruments became available "forage of the prostate" was recommended by Luys and the "punch operation" by Young. The operator, however, worked in the dark and under great difficulties; severe haemorrhage was common, and the obstructing mass was either crushed or burnt away with the cautery. The immediate results in cases that came under my observation were poor. Though I have not been able to follow up any series of cases, it would seem that scars resulting from such wounds must follow the course shown in other parts of the body and later contract and give rise to a stricture at the neck of the bladder. These methods received little support in other countries, and never came into favour in this.

In 1910 Beer first applied diathermy to growths of the bladder, which were destroyed by electro-coagulation. This

was the first practical method of treating such growths through the urethra, and had the advantage of being carried on in a water medium. Though sloughs were produced that took two weeks to separate, no infection followed and haemorrhage was never severe. The scar, unlike that resulting from open operations upon the bladder, did not contract and pucker up. This feature of the diathermy scar is well seen in the face, where, after the removal of rodent ulcers, the scar remains soft and supple, and differs very markedly from those which follow burns and granulating wounds. At that time the difficulty in applying diathermy to prostatic lesions was that, while the obstructing mass could be clearly seen, the electrode could not be applied to it through the ordinary cystoscope. About 1916 cysto-urethrosopes of the Brown-Buerger type were introduced, with which the surgeon worked from the prostatic urethra; with these not only could the parts adjacent to the neck of the bladder be seen, but the electrode could be applied to the obstructing mass under the control of the eye. Since 1918 I have by means of this instrument treated cases of prostatic obstruction by diathermy with much success; but it takes two or three weeks for the slough to separate, and during that time micturition may become more difficult and the passage of a catheter may be necessary. The diathermy punch of Mr. Kenneth Walker¹ is a great improvement, as now we have an instrument by which the obstructing mass can be seen, destroyed by diathermy, and removed at the same time. In the series of cases I have been able to follow up no stricture has formed.

When the operation of prostatectomy became popularized, at the beginning of this century, it was limited to the senile or so-called adenomatous enlargement. A perfect functional result followed, provided no malignant changes were present, and a mucous membrane flap was prevented from forming over the prostatic cavity. As the technique of the operation improved and the mortality diminished, it was found that in some cases the functional result was not so good. If from these cases were eliminated those where the symptoms were due, not to lesions of the prostate, but to diseases such as tabes, and those where malignant changes were present, the remainder fell into three main classes: (1) Those in which the prostate was atrophied or there was slight thickening round the bladder neck, the so-called "prostatisme sans prostate" of Guyon, or the prostatic bar to which Guthrie² first drew attention in 1830. (2) Those in which the prostate was small and fibrous. (3) Those in which the prostate was large and fibrous. These cases were characterized by the difficulty in removing the prostate, which was torn out rather than enucleated, by the shock and the amount of bleeding that followed, and by the prolonged convalescence, during which it was often necessary to pass sounds to keep the orifice dilated. Urinary symptoms persisted after the operation, and many of the cases died after a year or two with wasting and cachexia. Some surgeons regarded this as due to malignant changes, though none was found in the part of the gland removed, nor could any signs be detected on rectal examination. Death really resulted from renal failure and an infection ascending to the kidneys, both secondary to a stricture at the neck of the bladder.

When studying the pathology of the prostate it should be borne in mind that it is a secondary sexual gland, which, like the breast, undergoes involution about the age of 45. The adenomatous enlargement has been compared to the cyst-adenoma of the breast, and, like it, can be easily shelled out from the surrounding tissues. The different conditions found in the prostate are sometimes regarded as modifications of this; that, I think, is a mistake, for if they are not distinct pathological entities, they are at any rate very definite types of the same disease. Just as in the breast there may be a hypertrophic or an atrophic mastitis, so in the prostate there may be a large or a small fibrous prostate, and even atrophy of the gland itself, quite apart from the local changes in the glands of Albarran that are situated round the bladder neck. While the adenomatous enlargement tends to become progressively larger, this is not the case with the other varieties, for they are fibrous in type, and after reaching a certain size