before the time of the expected period will bring on the flow almost to a certainty. In some instances the periods were brought on after the patient had ceased menstruating for over a year. In the case of country girls who have "seen nothing" for a month or two after coming to town the treatment has answered admirably. Often enough patients do not consult their doctor until they are "overdue," until the time of the expected period has passed by for some days. Even then the prompt administration of the permanganate will often bring on the flow at once, but should it fail to do so the treatment ought to be continued, and the patient will probably menstruate normally at the next monthly time. Generally our efforts are not crowned with success until the medicine has been taken for at least three or four days, but in some instances the permanganate acted with striking rapidity, the menstrual flow making its appearance after only two or three doses had been taken. It is not necessary to discontinue the treatment on the appearance of the menses; in fact we generally tell the patient to continue taking the pills three or four days longer, finding that it facilitates the flow. The permanganate often succeeds well after the failure of other remedies, such as iron, aloes, nux vomica, strychnia, pulsatilla, nitro-glycerine, and hot mustard baths. Sometimes, however, it is necessary to give it for six weeks or even longer before the desired result is obtained. In those cases where the patient has menstruated only once or twice, and has then entirely ceased for some months, our treatment answers well; the menstrual function is re-established, and thenceforth proceeds normally at every successive monthly period. In some cases there was no actual amenorrhœa, but the flow was scanty, lasting perhaps only a single day, or it may be only a few hours. Here the administration of the permanganate prolonged the flow, and even in some instances when it had ceased brought it on again.

In girls of about fifteen or sixteen, who have never menstruated at all, the permanganate, as might be expected, is not so certain in its action; but even here it not infrequently acts promptly, bringing on the flow at once. In some cases where the general health was bad, and the permanganate had failed, we suspended treatment for a time, and sent the patients into the country for a month. On their return we gave the permanganate a second trial, and it succeeded at once. We have, however, sometimes failed to bring on the menstrual flow even when the patient was in fairly good health, and when there were the usual indications of puberty.

It is not only in the case of young women that manganese is so useful, it succeeds almost equally well with women between thirty-five and forty, who, as the result of many pregnancies and much suckling, have ceased to be regular. Here, for example, is a typical case. A married woman came to us complaining that she was never regular. She had had nine children in as many years, and rarely saw anything more than once between her pregnancies. She had been suckling for eight months, and had not been poorly for seventeen months—the nine months she had carried and the eight months she had suckled. She was not in the family-way, but said she expected she would be soon if she weaned the baby. She did not know when she ought to be poorly, and had given up all expectation of seeing anything. She was ordered two one-grain permanganate of potash pills four times a day, and came on poorly a fortnight after, the first time for seventeen months.

We need hardly say that before treating the amenorrhœa care should be taken to see that the patient is not pregnant, although we are satisfied that the permanganate given in the dose we recommend has no power to produce abortion either in the early or late stages of pregnancy. We find that manganese fails to induce the flow when the amenorrhœa is due to advanced phthisis. But in some cases of arrested phthisis the treatment was successful, and the patient, after a time, under the influence of the permanganate, menstruated freely and at regular intervals. In several instances patients informed us that the pills had proved of value in curing "whites" of long standing. As a rule the permanganate is taken without difficulty, but patients much prefer the pills to the solution. The solution is peculiarly disagreeable to take, and in some cases produces nausea and even vomiting. Patients frequently complained after taking the pills of a heavy persistent pain over the upper part of the sternum, "as if something had stuck there and would not go down." This was not due to the drug being given in the form of a pill, for the same complaint was made when the same dose was given in solution. One patient said the

pain was of a burning character, and another said it was like heartburn. A girl of sixteen, to whom two two-grain permanganate of potash pills were given four times a day, said the pain, "like a lump at the chest," came on immediately after each dose, and was so intense that she had to go to bed for two hours.

That the effects we have described are due to the manganese, and not to the potash in the salt, is shown by the fact that manganate of soda and binocide of manganese are equally efficacious in the treatment of amenorrhœa. The manganate of soda was given in two-grain pills, two four times a day; and the binocide in four-grain pills, one four times a day. It may be thought that the manganese acts by improving the condition of the blood, but this is not the case. The treatment succeeds equally well in the plethoric and in the anæmic. Given in cases of chlorosis, the permanganate not infrequently brings on the period without in any way improving the anæmia.

A CASE OF ADDISON'S DISEASE,

WITHOUT TUBERCULOSIS OF THE SUPRA-RENAL BODIES
AND WITHOUT AFFECTION OF THE SEMI-
LUNAR GANGLIA.

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THE present pathology of Addison's disease assigns its cause to be a "tubercular destruction of the supra-renal bodies," associated with "a general pigmentary deposition in the rete mucosum, and a remarkable form of progressive asthenia, which sooner or later ends in death."¹ A similar explanation is given by Drs. Wilks and Moxon in their "Pathological Anatomy," but here more stress is laid upon the connexion of the caseous degeneration of the adrenals with tuberculous disease of the lungs. Again, Dr. Greenhow, in his monograph on Addison's Disease, p. 25, where he is discussing the morbid process which takes place in the supra-renal capsules, lays it down that it is always identical, and "consists primarily in their infiltration by an inflammatory exudation of low type, which destroys the normal structure of the organs, and finally itself undergoes caseous degeneration." And in his paper on Addison's disease read before the International Medical Congress, 1881, he refers "most of the more prominent symptoms of the disease to some morbid condition of the neighbouring nerves," and further states that "it is almost certain that these symptoms are caused not by impairment of any special function of the supra-renal capsules themselves, but by injury to the important branches of nerves which pass into the capsules, and of the ganglia and plexuses in their immediate neighbourhood." Hence it would seem that while some pathologists conceive that the inflammatory lesion suffices to develop the symptoms, others believe that, though the tubercular condition is always present, the symptoms are due to some affection of the neighbouring nerves and ganglia. Yet the following case tends to show that, on the one hand, tuberculosis of the supra-renal bodies is not required to cause Addison's disease, and, on the other, that the symptoms of this malady may exist without any apparent lesion of the adjacent sympathetic ganglia. The case is especially noteworthy, because of (1) the complete absence of caseation and of tuberculosis; (2) the atrophic condition of the supra-renal bodies; (3) the correspondence of the smaller supra-renal body to the larger ganglion. And, I conclude, from a consideration of the morbid appearances, that the pathological element of this disease is to be sought in the central part of the supra-renal capsules themselves.

Mary A. C—, aged forty-eight, was admitted into the Westminster Hospital under the care of Dr. Fincham on March 31st, 1882. Her father's brother suffered from gout, one of her sisters died of phthisis. The patient is a married woman, and has had eight children. The menopause took place four years ago. She has had no previous bodily illness, but in 1880 had some great domestic trouble; has not suffered from exposure, privation, or injury. For the past year she has been complaining of weakness and has become much worse in the course of the last three months, during which period she has been losing flesh. Six weeks

¹ Bristowe's Medicine, Fourth Edition.

ago she began to suffer from headache, which has continued ever since. The darkness of the skin commenced to show itself about four weeks ago, or at least was not noticed before. The above symptoms became intensified in the beginning of March, and were accompanied by fainting fits, constipation, and nausea. During the two weeks previous to her admission the loss of strength and flesh was very rapid. She then began to vomit her food, and has retained very little nourishment ever since. The patient has been laid up in bed for one month. On admission it was found that she was very weak, and somewhat emaciated, with an anxious, drawn expression and sunken eyes. There was a general duskiness of tint over the face and the whole surface of the body. On the back and right side of the neck, and on both elbows, were a number of circular dark-brown patches; the areolæ were of a dark-chocolate colour, and on the mucous membrane of the left cheek was an irregular dark patch about the size of a sixpenny-piece. The pulse was small and weak, and the heart's action rapid but regular. There were no abnormal auscultatory signs in the thorax. Urine acid, sp. gr. 1020; no albumen. Weight 6 st. 12 lb. 10 oz. Patient constantly vomited. She was ordered liquor arsenicalis, five minims, after food. Between this and her death the patient vomited all nourishment taken by the mouth, and peptonised food was administered per rectum. She became rapidly weaker, and died April 7th. Her weight taken a few hours before death was 6 st. 3 lb. 10 oz.

Necropsy made by Dr. HEBB, nine hours after death.—Body somewhat emaciated, but there was a considerable amount of adipose tissue within the abdominal cavity; slight rigor mortis; the viscera were quite warm; there was a subconjunctival hæmorrhage of the left eye. The blood was quite fluid, and contained an unusual quantity of free liquid fat. There was no staining by blood colouring matter of the serous or other tissues. There was not a trace of caseation in any part of the body. The skin generally was bronzed, but there were patches of deeper pigmentation in the following situations: around the nipples, in both armpits, in Scarpa's triangles, below both knees, over against the lower cervical region an irregularly oval area about six inches by four inches, and on the mucous membrane of the mouth and of the vulva. Brain weighed 50 oz.; membranes and nervous tissue normal. The pleuræ were quite smooth and shining. Both lungs were crepitant throughout. Heart weighed 6½ oz., the valves were competent; the aortic measured 2.75 in., the mitral 3.50 in.; the muscular tissue was firm but of a brownish colour. The pericardium was normal. The liver weighed 50 oz., normal. Spleen 2½ oz., soft. Kidneys each 4½ oz., congested, otherwise normal. The supra-renal bodies weighed—right, 28 gr.; left, 19 gr.; they retained their shape, were of a reddish colour, and of a softer consistence than usual; on section the internal pearly-white layer was found to be absent. The abdominal sympathetic ganglia, especially the left semilunar ganglion, seemed larger than usual. The stomach contained several ounces of a pulaceous material of a malachite-green colour. Both ovaries were shrunken, and from the os uteri poured a glairy white discharge, otherwise these viscera were normal.

Microscopical examination of the semilunar ganglia failed to discover any lesion of the sympathetic nerve cells, although comparison with several normal semilunar ganglia suggested that there might be increase of the connective tissue element. The bloodvessels were certainly larger and more numerous.

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MEMBRANOUS POLYPUS OF THE CERVIX UTERI.

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IN the body of the uterus there are principally two forms of benign polypus found—viz., the soft or mucous, and the fibrous or muscular, which may be regarded as an extension of the proper tissue of the uterus, covered by a corresponding extension of the lining membrane of the organ. In the neck of the uterus one other well-recognised form is super-added—viz., the glandular, principally constituted by enlarged glands of Naboth. In addition to these, however, several varieties are recognised: the fibrinous, either from a

coagulum in utero, or from an aborted ovum; the vascular, from varicosity of the submucous bloodvessels; the placental, which again results from detained and variously altered placenta; the fatty polypus may be regarded as a degenerated fibroid.

The polypus of which this paper takes special cognisance does not belong to any of these varieties. Yet it is strictly a benign polypus, springing from the internal surface of the cervix uteri. Some years ago I saw a patient who had been out of health for many months. Her age was about fifty. She was stout, but there was a sustained feeling of indisposition in the patient, and exertion with her soon produced fatigue. This lady was keenly susceptible to the influence of cold, and when acted upon by it, she commonly became affected with cervical uterine leucorrhœa. When this patient came under observation there was present aching of the lower part of the back, around the hips, and down the thighs; but there was no other localised complaint, excepting only slight tenesmus on defecation and micturition. The grand climacteric had been passed, but the later catamenial periods were marked by much discomfort, even by suffering, and by great irregularity in the character and in the quantity of the discharge. On examining the uterus per vaginam with the finger, the os uteri was found to be much dilated, and immediately within it a rounded body was reached by the examining finger. The cervical walls were soft and even. No blood issued on freely touching the intra-cervical foreign body. By the aid of the vaginal speculum the presenting tumour was seen to be evenly rounded in outline, and to fill completely the canal of the cervix uteri. Nothing like blood or pus covered it. On pressing the uterine probe upon this dark-coloured body it became deeply indented, and by onward pressure it receded within the cervical canal. On withdrawing the probe the tumour resumed its former site and appearance. Laminaria tents were passed through the cervical canal, and free dilatation of it was effected. And now, on making digital and ocular examination, the tumour was nowhere to be found, and no bearing down on the part of the patient and no pressure on the hypogastrium could force the growth again into view. The finger, indeed, could feel an uneven condition of the anterior wall of the cervical canal, but no other abnormality could be detected. The cervix was allowed to contract upon itself again, and on the fourth day after the examination just referred to the tumour was again found in the cervical canal. It was now carefully examined and found to have a broad attachment to the anterior cervical wall, and to be gradually lost in the surrounding parts. Excepting for the points of attachment the tumour did not appear to have, exactly, any of the characters of the polypus formed by enlarged Nabothian gland. It was concluded then that the abnormal growth was nothing but a rounded fold—a prolapse, in fact—of hypertrophied cervical mucous membrane. On this assumption a line of treatment was determined upon and carried out. The wall of the cervical canal, after dilatation, was freely swabbed with the stronger solution of perchloride of iron; and a dossil of lint, saturated with glycerine, was placed in the canal for twenty-four hours. This operation was repeated on three other occasions, after which neither probe nor finger could find a vestige of the tumour. On seeing this patient three weeks after the last application the cervical canal was found to be free from abnormal growths, and the discomfort and tenesmus formerly felt had quite disappeared.

About two years ago this patient again came under my observation with symptoms nearly identical with those already referred to. Some persistent leucorrhœa, however, was superadded. On examination a tumour was found similar in many particulars to that which had been observed before. It was, however, much larger, and hung down from the uterine orifice into the vagina. It had the form of a pear, and was attached by its pedicle to the anterior wall of the cervix uteri. The growth was now summarily dealt with: a loop of fine wire, passed through a silver tube, was carried over the polypus, as nearly as possible to the points of its attachment to the cervical wall, and tightened; then, with a seesaw motion of the wire the attaching textures were cut through, and the tumour was removed. Although there was almost no bleeding, the stronger solution of perchloride of iron was freely applied to the cut surface as a matter of security. In two days the patient was well, and has continued so up to the present time. On examination of the tumour after maceration in a solution of common salt, it was found to be pear-shaped,