the two methods: that the vaginal methods do not include the pack, together with version and the bag, as practised in Watson's statistics, but rupture of the membranes only in slight cases and version in the more severe. He regards the addition of the pack as a grave danger, and considers that no attempt should be made to dilate the cervix by the fingers; that the delivery should not be hastened unless the os is well opened and strong pains are present; and that the patient, once the haemorrhage has been arrested, must be allowed to recover before she is delivered.

We must also bear in mind that Caesarean section for placenta praevia has the special dangers of added shock, of further haemorrhage during the operation, and of sepsis.

In comparing the results from these two methods it is not only the actual method that we must consider but the manner of the subsequent delivery if the vaginal route is employed. Version and pulling down a leg is not of itself attended with much maternal risk, but it will be if the delivery is hurried and is not allowed to occur at a suitable time and to proceed at a slow rate. Caesarean section is obviously unsuitable in patients already suffering from shock and from severe haemorrhage. Here the indication clearly is to arrest the haemorrhage temporarily and to give the patient time to recover. But to deny all place to Caesarean section would be wrong. It is to be advised in the case of an elderly primigravida in good condition who is strongly desirous of a living child, in whom the foetus is alive at or near term, and the placenta covers the os, which is small and rigid. In such a case there is bound to be a considerable amount of inevitable haemorrhage; any vaginal manipulations necessary are certain to cause further haemorrhage, and the outlook for the foetus by the vaginal route is almost hopeless. By doing Caesarean section in such a case as this we can not only secure a living child, but considerably diminish the maternal risk.

SUMMARY.

The views which I have put forward and discussed may be summarized as follows:

1. Early diagnosis is essential.
2. Once the diagnosis is made the pregnancy must be terminated.
3. "Slight cases" are best treated by rupture of the membranes and a tight abdominal binder.
4. Plugging is inadvisable, except as a very temporary measure.
5. Certain selected cases may be treated by Caesarean section.
6. Most cases are best treated by external version and plugging by the half-breech. The labour in this case must be conducted slowly.
7. Institutional treatment is necessary in all but the "slight cases."

REFERENCES.

- ¹ Bourne: *Recent Advances in Obstetrics and Gynaecology*, 1926.
- ² Conrad: *Zentralbl. f. Gynäk.*, January, 1925.
- ³ Eden and Holland: *Manual of Midwifery*, 1925.
- ⁴ Ganssle: *Arch. f. Gynäk.*, March, 1923.
- ⁵ Jellett: *BRITISH MEDICAL JOURNAL*, 1925, vol. ii, p. 231.
- ⁶ Miller: *Trans. Edin. Obstet. Soc.*, 1924, xiv, 65.
- ⁷ Schweitzer: *Zentralbl. f. Gynäk.*, November, 1922.
- ⁸ Watson: *BRITISH MEDICAL JOURNAL*, 1925, vol. i, p. 363.
- ⁹ Willett: *Proc. Roy. Soc. Med.*, 1925.

TWO CASES OF MIKULICZ'S DISEASE TREATED WITH RADIUM.

BY

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In 1892 Dr. Johann Mikulicz of Breslau published a paper¹ on a peculiar symmetrical disease of the lacrymal and salivary glands. Four years previously he had shown a case at a medical meeting in Königsberg. In this patient both lacrymal glands and all the salivary glands were converted into tumours in a perfectly symmetrical fashion, thrusting them out of their normal position, and deforming the face. The tumours had arisen gradually, and at the time of examination were dense, painless, and without a

trace of inflammation. The patient exhibited no other sign of disease. The following is an abstract of Dr. Mikulicz's notes of the case.

MIKULICZ'S CASE.

January 13th, 1888. The patient was a powerfully built, well nourished man of otherwise healthy appearance. Nothing abnormal was found in the internal organs. No albumin. No enlarged glands found elsewhere. The blood showed no special changes. Pulse and temperature normal. The face was extraordinarily altered in appearance by symmetrical swellings in the neighbourhood of the upper eyelids, and of the parotid and submaxillary glands. The orbital fissures were narrowed to small triangular fissures, the base of which was formed by the inner two-thirds of the edge of the lower lid. A certain amount of convergent strabismus had resulted from this condition.

On palpation a small knobby, dense tumour of transversely oval shape was found under the outer half of each upper eyelid. The conjunctiva itself was slightly reddened and a little thickened. The sight was unaffected. In the parotid area on both sides there was a flattish, not very prominent, and uniform tumour, extending forwards to the middle of the cheek, backwards to the mastoid process, and so lifting the lobule of the ear considerably. In each submaxillary region was a tumour about as long as a hen's egg, of dense consistency, and slightly movable. The two tumours almost met in the middle line under the chin. On opening the patient's mouth the sublingual glands presented as two elongated swellings about the shape and size of an almond set on its edge, and occupying the floor of the mouth on both sides of the frenum linguae. The glands of the soft palate exhibited an enormous increase in size, forming a sharply defined tumour as big as a chestnut on both sides, and being separated by a groove 0.5 cm. wide in the middle line. During the examination of the patient there was a free secretion of saliva, though there was no appearance of a flow.

As the swelling of the eyelids was the only thing which caused the patient much discomfort, a partial removal of the enlarged lacrymal glands was undertaken on February 1st, 1888. On either side a mass of tumour, about 2.5 cm. long by 1.5 cm. broad, was removed. Healing was normal, and the patient left the hospital in a few days, well pleased with the result. The improvement was, however, very transient; the swelling of the upper eyelids speedily recurred, and the patient returned to hospital at the end of March, the swelling of the lacrymal glands being then nearly as large as before the operation. Pilocarpine was injected in the hope that an increased secretion might reduce the size of the glands. No benefit resulted, and on April 19th the right, and on May 1st the left, lacrymal gland was extirpated. The patient made an excellent recovery, and was discharged ten days later.

He wrote on July 12th, 1888, that he was well pleased with his condition, and that he had no trouble with his eyes. The parotid glands appear to have gone on increasing in size, but they did not bother him. He died of perityphilitis early in August, 1888, after nine days' illness. During his illness the parotids rapidly diminished in size, and at the time of his death were almost normal.

Microscopical examination of the lacrymal glands removed by operation showed that the proper gland parenchyma played a purely passive part, and that the increase in size was due entirely to a voluminous infiltration of the interstitial connective tissue by small round cells (lymphocytes).

Two cases of what appears to be the same disease have been seen recently at the Radium Institute, London.

TWO NEW CASES.

Case 1.

A married woman, aged 62, was first seen on January 21st, 1924. She was referred to the Radium Institute for treatment by Mr. H. P. Gibb, F.R.C.S. She had consulted him for diplopia, which had existed for about eight weeks, and was obviously due to downward displacement of the left eyeball by an enlarged lacrymal gland. No very definite history could be elicited from the patient, but she thought that the swelling beneath the left upper eyelid had begun to be noticeable about nine months previously. She volunteered the statement that she had been in hospital in 1922 for a tumour of the spleen; but no further or more detailed information could be obtained.

The left lacrymal gland, which was the size of an unshelled almond, had displaced the contents of the orbit downwards and inwards, and the orbital fissure was much narrowed; diplopia was very marked. In the right parotid was a swelling the size of a golf ball; it was smooth and elastic, not fixed, and did not implicate the covering skin. In the upper part of the right parotid region was a small scar, indicating the site at which a portion of the growth had been removed for a pathological examination. The pathologist reported "lymphocytic infiltration of the tissues." The left submaxillary gland was swollen to the size of a thrush's egg. The right lacrymal, right submaxillary, and left parotid glands were unaffected. No enlargement of the spleen was appreciable. The blood count was normal. The Wassermann reaction was strongly positive.

The patient received a series of five sittings each of five hours' duration on five successive evenings, with applicators containing 120 mg. of radium element, screened with 2 mm. of lead, applied over and around the enlarged glands, so as thoroughly to irradiate them. The last exposure was given on January 25th, 1924.

She was examined again on March 24th, 1924. The swellings in the left lacrymal, left submaxillary, and right parotid glands had completely disappeared. The left orbital fissure was as widely open as the right, and there was no longer any diplopia.

The patient returned on July 21st, 1924, as the trouble was, she said, recurring. Examination revealed a very slight swelling of the left lacrymal gland, but there was no narrowing of the orbital fissure, and no diplopia. There was an appreciable fullness of the upper half of the right parotid gland over an area 3 cm. in diameter. The left submaxillary gland was no longer palpable. The right lacrymal, right submaxillary, and left parotid glands remained unaffected. The treatment was repeated from July 21st to 25th, and she was asked to report early in October. She did not come on the appointed date, but wrote saying that she was an in-patient at King's College Hospital, suffering from a tumour of the spleen, but that her face was quite well. She was under the care of Sir Charlton Briscoe, whose house-physician, in reply to an inquiry as to the patient's condition, wrote:

"The patient was admitted here on August 25th, 1924. Spleen greatly enlarged, lower border below level of umbilicus, consistence hard, surface slightly uneven, edge sharp, not tender. Liver enlarged (lower border 2 inches below right costal margin), hard sharp edge, not tender. Ascites definitely present, but not marked. No oedema of feet; urine loaded with urates, no albumin. Wassermann test positive. The salivary and lacrymal glands appear to be quite normal at present.

Blood Count.

Red cells	...	...	...	3,440,000 per c.mm.
Haemoglobin	...	...	...	68 per cent.
Colour index	...	...	...	1
Leucocytes	...	...	...	1,600 per c.mm.
Differential count:				
Polymorphs	...	...	...	42 per cent.
Lymphocytes	...	...	...	56 "
Eosinophiles	...	...	...	2 "

The case is regarded as one of splenomegaly of the Banti type, associated with and probably irritated by a syphilitic infection."

Case 2.

A married woman, aged 41, was sent by Professor J. B. Bradbury of Cambridge to the Radium Institute for treatment. The disease had existed for about seven years, and had been slowly progressive. Some x-ray treatment had been given during 1925, with slight but transient benefit, and as the last exposures had failed to produce any improvement, radium treatment had been suggested.

When examined on March 10th, 1926, both parotids were found to be enlarged, each to the size of a small lemon, the covering skin was smooth and not implicated, and the swellings were firm and elastic. Some degree of movement of both parotids was possible. Both submaxillary glands were enlarged to the size of unshelled almonds, and were easily palpable through the floor of the mouth. They presented the same physical characteristics as the parotid glands. The palpebral glands were not definitely enlarged, but the mucosa of both upper eyelids was much congested, and the eyes watered a great deal. The salivary secretion was very deficient, and the patient complained of great and persistent dryness of the mouth. There was no history of syphilis.

Treatment was carried out by means of numerous half-strength applicators containing in all 240 mg. of radium element. These were screened with 2 mm. of lead, and so disposed as to procure an effective "crossfire" radiation. The total exposure was of thirty hours' duration, given at spaced intervals over a period of three days.

The patient came again for examination on May 27th, 1926. No trace of the swellings remained, and the flow of saliva had returned. She stated that the swellings began to diminish rapidly a few days after treatment, and had quite disappeared within three weeks. Wholly disinterested and unsolicited testimony to the efficacy of the treatment was afforded by the patient's son, a child of 8, who, gazing at his mother in some bewilderment a few weeks after her exposures, remarked, "Oh, mummy dear, your face has got so thin!"

The disease is rare, but cases are reported from time to time by competent observers. No specific line of treatment has ever been indicated; arsenic and iodides have been the drugs chiefly employed, and in some instances x rays have been found to be of service.

The cases here recorded are not absolutely typical, but it would appear difficult to classify them as anything other than Mikulicz's disease.

In both instances the condition was bilateral, but in one the lacrymal glands were not definitely attacked. In the other the disease was asymmetrical, affecting the lacrymal and submaxillary gland on one side, and the parotid gland only on the other. One patient had a definite syphilitic history, and the Wassermann reaction was strongly positive. The other patient had enjoyed good general health all her life.

The extremely rapid response to the treatment is undoubtedly due to the pathological nature of the malady—namely, an intense lymphocytic infiltration of the sustentacular tissue of the glands; the lymphocyte being of all cells the most susceptible to radium irradiation.

REFERENCE.

¹ *Beitrage zur Chirurgie*, Billroth Festschrift, 1892.

A NEW METHOD OF PREPARING TUBERCULIN.

BY

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THE conclusions and recommendations in the following paper are based on the experience of tuberculin treatment in two series of cases, including both sanatorium and dispensary patients, during a period of ten years. In my experience tuberculin has proved of definite value in the treatment of certain forms of tuberculosis. When used in the sanatorium at the stage when the patient has become non-reactive to manual labour it provides a useful guide to the absence or presence of susceptibility on the part of the patient to relapse from overstrain, and, if tolerance has been established to increasing doses, it secures a definite although admittedly not a permanent protection against such relapse. In non-pulmonary tuberculosis the beneficial effect of tuberculin is frequently quite definite. Old tuberculous sinuses, discharging tuberculous glands, and localized lesions of the skin which have resisted other forms of treatment frequently yield in quite a striking manner to treatment with tuberculin.

In acute and active cases of the disease tuberculin has proved to be of little value, and is indeed contraindicated because of the disturbance to which it gives rise. In the less active or smouldering type of the disease, however, in which the temperature does not exceed 100° F., treatment with tuberculin TOA (filtrate) does in certain cases give good results by lowering the temperature and lessening the swing. In such cases treatment with tuberculin should be combined with strict rest in bed, but even in patients of this type who have not been confined to bed the beneficial effect of tuberculin TOA on the temperature has been noted.

The general conclusions regarding the value of tuberculin treatment are as follows: (a) Tuberculin is of no value, and is indeed contraindicated in the treatment of acute and active cases of pulmonary tuberculosis. (b) Inoculation with tuberculin TOA (filtrate) can safely be given in certain cases of subacute type in which the temperature does not exceed 100° F., and is indeed not infrequently followed by beneficial results, as is indicated by a lowering of the temperature to within normal limits. (c) Inoculation with tuberculin BE or TR containing the body of the bacillus or its contents is of value in ambulant cases of pulmonary tuberculosis which do not react to the muscular movements associated with walking exercise and manual work. (d) Tuberculin treatment induces complete healing in certain cases of non-pulmonary tuberculosis, especially those associated with a chronic discharging sinus. (e) Tuberculin treatment rarely promotes complete healing in pulmonary tuberculosis, but if used for an extended period in suitable cases it tends to induce quiescence, to encourage fibrosis, and to confer some definite protection against relapse.

It is doubtful whether the treatment of tuberculosis with tuberculin has received a sufficiently fair and extended trial in this country. The variety of tuberculins in use and the different methods of administration employed have militated against accurate treatment and satisfactory results. Too frequently treatment has been employed in quite unsuitable cases or has been discontinued because no immediate striking result has been obtained. In the preparation of tuberculin also methods have been adopted which are no doubt partly responsible for the absence of more definite and more immediately beneficial results. These methods are (a) the selection of an unsuitable strain of the tubercle bacillus as a basis for preparation; (b) the continued culturing of strains of tubercle bacilli on artificial media which differ in many respects from the natural medium found in the human or bovine host, with the result that an artificial strain of bacillus has been evolved; and (c) the employment of heat and chemical or physical agents for purposes of sterilization and extraction, which agents must modify the character of the toxic products of the bacilli elaborated in the culture medium during the process of growth.