The patient did not consult me again until March 18th, 1902 (six and a half years later), when she complained of increasing prominence of the eye. Since 1895 she had been under treatment at various eye institutions and had been told the eye would have to be removed. The sight had improved since the former consultation. R.V. = $\frac{3}{4}$ c. + 2 D. = J. 4; L.V. = $\frac{3}{4}$ and J. 1. She was extremely anxious to save the eye, although her present condition made it impossible for her to go out and enjoy the society of her friends. I got leave to do what I thought prudent.

Operation.

On March 23rd, 1902, the patient being anaesthetized by Mr. F. Falconer, M.B., I slit up the outer canthus of the proposed eyeball to its full extent, that is, to the bony boundary of the orbit. The conjunctiva was incised horizontally, and separated above and below. The external rectus was next divided some 5 or 6 mm. from its insertion and thrown back. On passing a finger into the orbit behind the eyes, a mass of soft tissue was felt on the outer side. Through this the tip of the finger was forced, and long shreddy strips of soft granulation tissue were torn away. The haemorrhage was free. After the removal of this tissue the finger came on a well-defined lump of firmer consistency with a smooth surface, which resisted attempts to free it. It extended towards the apex of the orbit in close contact with the lower and outer side of the sheath of the optic nerve. With the tip of the finger and the help of a blunt dissector and patience, the tumour, which was fully encapsulated, was separated and removed without tearing its capsule. It had no pedicle. During these manoeuvres the eye was drawn forwards and upwards, and every care was taken not unduly to press on it. The orbit was washed out freely with warm perchloride of mercury lotion (1 in 6,000), and all haemorrhage stopped; the parts were replaced, and approximation of the cut ends of the external rectus was attempted, a matter of difficulty, owing to the collapse of the orbital tissue.

After-History.

The after-history of the case was uneventful. In April, 1905 (three years after the operation), there was no proptosis. R.V. = $\frac{3}{4}$ and J. 4 at 6". L.V. = $\frac{3}{4}$ and J. 1. There was some paresis of the right external rectus and slight convergent strabismus and enophthalmus. Since the operation the patient says her health has been better, and she is no longer troubled with headaches or dizzy feelings, which were constant before.

When seen in July, 1907, she remained quite well, and there was no sign of any recurrence.

PATHOLOGICAL REPORT.

The tumour was sent to Professor Delépine, Victoria University, and examined by Professor Delépine and Dr. Arthur Sellers. The following is the report:

The tumour was about the size of a pigeon's egg, and had a fairly distinct capsule. The surface was smooth, dark brownish-red in colour, with several small areas more deeply pigmented. It was generally soft to the touch, but at one end there were several somewhat hard nodules about the size of a pea. On section at one end there was seen a cyst containing blood. The rest of the cut surface was composed of strands of tissue with small intervening spaces filled with blood.

On microscopical examination the cavernous spaces were seen to be very irregular in size, and to have thin walls with a lining of endothelial cells. The stroma was very abundant, part of it in a state of hyaline degeneration. The connective tissue round many of the spaces was very cellular, and there were several masses of lymphoid tissue, some of them forming a sheath to small vessels. The majority of the connective tissue corpuscles, connected with fibrous bundles, contained large, pale, irregular pigment granules. These granules were very numerous round some of the vessels. They appeared to be derived from the blood.

The tumour has the structure of a cavernous angioma. There is no clear evidence that it is angio-sarcomatous. Considering its slow growth the tumour, if malignant, is of low malignancy, though some of the cellular patches are indistinguishable from a round-celled or lympho-sarcoma. Nests of embryonic cells are, however, not uncommon in angiomatous tumours, which are frequently of congenital origin, so that, though the prognosis should be guarded, it need not be unfavourable.

A communication by J. Herbert Parsons on Primary Extra-dural Tumours of the Optic Nerve is published in the *Transactions of the Ophthalmological Society*, vol. xxiii, 1903, p. 117, and includes an abstract of eighteen cases and a bibliography.

ACCORDING to the German *Universitäts-Kalendar* the number of medical students in the several universities of Germany during the summer semester of 1907 was as follows: Munich, 1,248; Berlin, 876; Freiburg, 645; Leipzig, 498; Würzburg, 449; Heidelberg, 397; Kiel, 340; Marburg, 291; Bonn and Breslau, 277 each; Jena, 275; Tübingen, 242; Strassburg, 233; Königsberg, 216; Halle, 210; Greifswald, 201; Erlangen, 199; Göttingen, 176; Giessen, 173; Rostock, 122.

APPENDICITIS COMPLICATED BY HEPATIC ABSCESSSES.

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THE following case of appendicitis presented certain unusual features which render it worthy of record:

Previous History.

On April 14th, 1906, I was called to a well-developed man, aged 48, who had felt "chilly" the previous day, and who during the hot weather of the preceding week had on several occasions got very hot cycling. He had had "dysentery" ten years before, but no other serious illness.

History of Illness.

He looked slightly yellow and complained of vomiting; the temperature was 99.6° F. He was sent to bed and put on light diet and given 5 grains of calomel that night. Next morning he was downstairs, and his temperature normal, but his sister (a nurse) informed me that he had had a rigor during the night and his temperature had gone up to 106° F. The vomiting had lessened, and on examination there was no evidence of tenderness. He was sent back to bed. He had a rigor that night, and his temperature rose to 104° F. just after. He was given quinine in 3-grain doses four-hourly.

On April 17th I witnessed a rigor; it lasted a quarter of an hour, and during it the temperature rose rapidly and continued to rise for a quarter of an hour after, finally reaching 105.6° F. I then found a slight ridge 2 in. long and $\frac{1}{2}$ in. broad lying obliquely about one fingerbreadth internal to the right anterior superior spine, and best felt by standing on the right side of the patient facing his face and using the ulnar border of the left hand. It was slightly tender, and the tenderness was relieved after examination.

On April 18th the late Mr. F. W. Storry of Stroud kindly saw him with me, and we could find no physical sign except the ridge, but the jaundice was slowly increasing. After this date the rigors temporarily ceased and the ridge became more superficial and larger, but I could make out no fluctuation. The temperature varied between 102° and 103° F.

Operation.

On April 22nd (eight days after the first rigor), as the temperature still kept up and the ridge was getting still more distinct, Mr. Storry operated. A small abscess containing very offensive pus was opened; the appendix, which was much thickened, was removed, and on opening it the mucous membrane looked very unhealthy, and was "shed" in places. A small perforation was found just on the distal side of the ligature, which was tied round the stump, as, owing to its thickened condition, it was impossible to suture it in the usual way. The patient stood the operation well, and that night his temperature fell.

After-History.

On April 25th he had a rigor, the first since April 18th, and on April 26th, Mr. Carwardine of Bristol kindly saw him with Mr. Storry and myself. He agreed with us that the case was probably one of pyaemic liver abscess, but said that the presence of a pocket of pus shut off from the rest of the abscess cavity could not be altogether excluded, especially as he thought that, per rectum, there was slightly more resistance on the right side than on the left, and that the patient should have the benefit of the doubt.

Accordingly, the next morning we explored the wound under an anaesthetic, but found no pus in loin or pelvis. Two large drainage tubes were inserted, the one towards the loin, the other towards the pelvis; and he was given daily 30 c.cm. of antistreptococcus serum (B. and W.) by hypodermic injection. On April 28th the quinine, which had been left off since the operation, was resumed.

The jaundice lessened, but varied a good deal; the rigors persisted daily, till on May 1st, I have a note, 3 p.m.: "Sweating—possibly in lieu of rigor," and after this he had no more rigors for ten days. They then returned, but there was no enlargement of the liver nor tenderness over it. The skin then began to show signs of oedema.

On May 17th diarrhoea set in; the motions were reddish, and a report by the Clinical Research Association says of the faeces: "No pus detected, but specimen contains a marked excess of unaltered fat." Hiccough also began and was troublesome for a week.

On May 19th he began vomiting dark matter, and, still thinking of liver pus, I had the vomit examined; but it was probably only a symptom of the septicaemia, for the report of the Clinical Research Association was: "The vomit contains much altered blood, of which the remains of the corpuscles are still visible. There are also streaks of mucus containing abundant leucocytes. There is no evidence of liver pus, but we doubt if it could be detected unless present in very large amount."

The antistreptococcus serum was omitted on June 1st, as it was not thought to be doing any good, and on

June 7th he complained of pain over the right lobe of the liver. This continued till, on June 9th, after taking a little nourishment, he suddenly collapsed and died in a few minutes.

Necropsy.

At a post-mortem examination on June 11th—forty hours after death—the following facts were noted: The wound was healthy and well shut off by adhesions, and neither in loin nor pelvis was there any pus. The peritoneum itself was normal, but its cavity contained a quantity of serous fluid mixed with pus. A number of small abscesses were found in the substance of the right lobe of the liver, and also two larger ones, which had communicated, and by projecting on the right surface of the lobe had caused the abdominal pain complained of from June 7th, and by their rupture into the general peritoneal cavity had caused sudden death. The left lobe and gall bladder were normal. The portal vein was normal, and had no communication with the abscesses, so that it was a lymphatic infection of the liver.

The interesting points of this case are:

1. That, though the patient had his first rigor on the night of April 14th, it was not till the evening of the 17th that the first physical sign was noticed, and then only a slight one.
2. That the antistreptococcus serum did no apparent good, whereas the quinine certainly appeared to lessen the frequency of the rigors.
3. That the right lobe of the liver was affected, but not the left.

The Goulstonian Lectures

ON

THE INFLUENCE OF PREGNANCY UPON CERTAIN MEDICAL DISEASES, AND OF CERTAIN MEDICAL DISEASES UPON PREGNANCY.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

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ASSISTANT PHYSICIAN TO GUY'S HOSPITAL.

LECTURE III.—PREGNANCY IN RELATION TO CERTAIN FEVERS.

MR. PRESIDENT AND GENTLEMEN,—The next variety of cases that deserves consideration is that in which the mother, being at the time pregnant, develops one of the commoner fevers. Generally speaking, the pregnant state seems to confer some degree of immunity, the reverse being true of the puerperium. Scarlet fever, for example, shows less tendency to attack a pregnant woman than other persons equally exposed to the infection; whereas a woman who has been recently delivered of a child is particularly prone to take the disease if it is in the vicinity. Nevertheless, pregnancy confers no absolute immunity to the specific fevers, and should the patient contract one the question will arise as to what is likely to be the result both as regards the mother and as regards the child.

TYPHOID FEVER AND PREGNANCY.

Typhoid fever, for instance, may develop during pregnancy. There are a fair number of papers upon the subject, references to several of which have been given by Mr. H. T. Hicks and myself in the *Lancet*.¹ The illness may begin at any period of the pregnancy, and, like typhoid fever in England generally, it is less liable to develop in the summer months than it is in the autumn and winter.

The course of the disease is precisely similar to its course in other persons. Pregnancy does not seem to have any particular influence on the severity of the illness nor upon the prognosis as regards the mother. The death-rate will doubtless vary in different years; in our own cases it was 14 per cent., in Vinay's 17 per cent., and in Dwyer's 16 per cent., figures which do not differ widely from those given by the Metropolitan Asylums Board for all cases. The effect of enteric fever upon the pregnancy is, on the contrary, bad. In the majority of the cases abortion or premature labour takes place. This was the result in 85 per cent. of our cases, in 66 per cent. of Vinay's, in 63 per cent. of Martinet's, and in 65 per cent.

of Penot's. The reasons for this high mortality amongst the children will be discussed below. Meanwhile it is right to mention, however, that it is quite possible in a minority of cases for the mother to pass through a typical and fairly severe attack of typhoid fever and yet for the pregnancy to continue to term and for the child to be born living and well. This was the case in one of our patients who developed typhoid fever in the fifth month of her pregnancy, recovered in due course, and was delivered at term of a healthy child who lived to grow up. There is no period of the fever at which a premature ending of the pregnancy seems more likely to occur than at another. The time at which it takes place depends rather upon the month of the pregnancy than upon the day of the fever. If the patient is already eight months pregnant, for example, delivery may occur during the first week or ten days after the onset of the fever; but if the pregnancy has not passed the fifth or sixth month it may continue into the third or fourth week of the fever and yet end prematurely. The mother seems to suffer remarkably little from the labour. Of course, she may already be in an extremely bad way from her typhoid fever, just as any other person might be, and then the prognosis is grave. It might have been expected that even if she had not hitherto been more than ordinarily ill from her enterica, the additional strain of labour must necessarily have made her considerably worse; this, however, is not the case as a rule. The delivery is most often easy and the patient experiences considerable relief. The uterus involutes just as if there were no maternal illness, and the fever usually runs just the same course as if the incident had not occurred.

Transplacental Transmission of Toxins, Agglutinins, and Bacteria.

Several points of considerable scientific, if not clinical, interest arise in connexion with the child. The following questions might be asked:—If the child were born dead during the course of typhoid fever in the mother, would it be likely that typhoid bacilli might be found in the fetal tissues; in other words, can typhoid bacilli be transmitted directly from the mother to the fetus? If the child's blood serum were tested by Widal's test, would it be likely to give a positive reaction? If so, does the fetus produce its own agglutinins, or does it receive them ready formed from the mother? If the fetus can and does become infected with typhoid bacilli, does it develop ulceration in the Peyer's patches of its intestine; in other words, can the macroscopic condition of the fetal bowel be relied upon as a certain indication as to whether the fetus is infected with typhoid organisms or not? If the fetus becomes infected with typhoid bacilli, does this happen soon after the mother falls ill? and, if not, how long after the mother's infection is that of the fetus likely to occur? Would the child, if it lived, have a natural immunity to typhoid fever, supposing it had remained in *utero* until after the mother had recovered from her fever? If the fetus is not affected in any of the above ways, or even if it is, are there any other lesions that it is likely to have suffered as the result of the mother's illness—lesions which may show their effects if the child lives and grows up?

It is only possible to give limited answers to some of these questions, and no answer at all to others; but it should some day be possible to give full answers if every case as it came under observation were fully investigated. The difficulty is that one does not always realize at the time the precise points to which attention should be particularly directed, and the cases are sufficiently few and far between to make it difficult for a single individual to investigate any large number of them. Here, therefore, is another subject upon which a carefully directed collective inquiry would be good. The great point about typhoid fever in this respect is that it affords a natural experiment in human beings upon the placental transmission both of chemical substances—the agglutinins—and of bacteria—the typhoid bacilli—simultaneously.

Before entering upon the facts known in regard to the placental transmission of agglutinins and bacteria in typhoid fever itself it will be well to summarize shortly what is known about placental transmission generally. It seems clear, in the first place, that transmission might conceivably take place from mother to fetus in one other way than through the placenta; it might occur *via* the liquor