effect, or rather non-effect, of the treatment were beyond all doubt, outweighs a great number in which the diagnosis was uncertain, and the possibility of natural cure by rupture or death of the foetus overlooked. And if electricity cannot be relied upon to kill an extra-uterine gestation, there are several objections to its use. First, it is wasting time and exposing the patient to dangers which might be avoided by more effective treatment. Then it is not free from danger, for there have been deaths accredited to electrical treatment of abdominal tumours. And even if electricity be successful in killing the foetus, the patient is not put beyond danger, for the presence of a dead foetus and its placenta may be the source of many accidents. For these reasons I do not think it yet fully established that our rule of practice ought to be to use electricity whenever early extra-uterine gestation is suspected.

There remains *abdominal section*, which has this advantage over puncture and electricity—viz., that, if successful, the cure is beyond all doubt final and complete. The objection to it is the risk to life; and the question which in individual cases has to be decided is whether the risk involved in an operation is greater than that of letting the patient alone. The question must be considered in each case by itself, for the relative risks of operation and expectancy differ so widely in different cases that a general rule cannot be laid down which shall be applicable to all cases at all times and in all circumstances. Abdominal section might be performed, if the diagnosis were made, before rupture. It never has been done, so far as I can ascertain. Maygrier quotes Veit as having twice operated before rupture, but on reference to the original record I find that in one case rupture had taken place, and as to the other no details are given from which to gather whether the sac had ruptured or not. Could the diagnosis be made with confidence, I think the certainty of cure by this method much outweighs the risk. And if, as in a large proportion of cases, the diseased tube be not adherent, the risk of operation would be hardly more than that attending the removal of normal ovaries.

I think I have seen operations spoken of as having been done "at the time of rupture." This phrase is only correct if understood in a loose colloquial sense. What is meant is, *soon after rupture*. A moment's consideration of the time that must be occupied first in sending for medical aid and then in making arrangements for operation will show that cases must be rare in which an operation can possibly be done so soon after rupture as to save the patient from the danger of death from the primary hæmorrhage. In the majority of cases of ruptured tubal pregnancy which have been submitted to operation the patient has rallied from the hæmorrhage, and it cannot be correctly said of them that they are cases in which life has been saved by arresting hæmorrhage. Thus in only four out of twenty cases operated on by Mr. Lawson Tait, and of which I have been able to find published details, does it appear that the patient was in immediate danger from hæmorrhage at the time of operation. The most that can be said is, that a disease has been removed which *might* have caused a renewed attack of hæmorrhage or peritonitis. But it is also possible that the patient might not have had further hæmorrhage, and that foetus and blood might have been absorbed, and the patient recovered, without operation. In these cases, the majority, it is not an alternative of operation on the one hand and death from hæmorrhage on the other, but of operation with a certain amount of risk but complete cure if successful on the one hand, against possible renewed hæmorrhage and possible inflammation on the other. What the chance is of renewed or of fatal hæmorrhage after the primary hæmorrhage has once stopped we do not know, nor what the chance of recovery. But there is a possibility of recovery without operation. The risk of an operation, at present, can no more be precisely formulated than that of letting the patient alone. It depends on two things—the skill of the operator, and the condition of the patient at the time of operation. The progress in the past encourages the confident hope, and indeed certainty, that, as experience increases, not only the skill of the best operators, but the average knowledge and skill of surgeons generally, will attain a higher level, and so the mortality of this operation will diminish as that of other operations has done. The other important condition is the time at which the operation is done. If done, it should be done early. The earlier it is done, the less the patient will have suffered from the effects of hæmorrhage;

effused blood will not have had time to decompose, nor adhesions to form.

Briefly, there is good reason to think that many cases of extra-uterine gestation recover when left to nature. There is not yet evidence to show that either puncture or electricity can be relied upon to cure. Many of the cases of supposed cure by these means are doubtful as to diagnosis; in others it is possible that the cure was the natural course of the disease; both puncture and electricity have failed, and puncture is dangerous. Early abdominal section offers the best prospect in cases in which treatment is necessary.

(To be concluded.)

ON

THE BENEFICIAL EFFECTS OF PERINEAL DRAINAGE AS A PRELIMINARY TO REMOVAL IN CERTAIN CASES OF TUMOUR OF THE BLADDER.

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INASMUCH as hæmaturia is often the only symptom present for a considerable period in the early stage of papilloma of the bladder—evidences of vesical irritability (viz., pain and increased frequency in micturition) not appearing until later in the course of the disease,—the bleeding is at first very frequently regarded as renal, not vesical, in its origin, and the case is accordingly treated as one of chronic kidney disease. Consequently it often happens that it is only in the later stages, when well-marked bladder symptoms have developed, that the case is no longer regarded as of a medical nature, and surgical assistance is at length summoned. The result is that when the patient comes under the surgeon he is often worn out and exhausted by profuse and continuous loss of blood, and therefore in a very unfavourable condition for any successful operative interference. This is what has now occurred at least twice in my experience. The patients had become so exhausted by profuse hæmaturia—in one instance of three years', in the other of twelve months' duration—that, though the tumours were successfully removed, they gradually sank after the operation; their strength had become so much impaired in consequence of their condition of extreme anæmia that they did not possess sufficient reparative power to meet the demands made on the system after the performance of a severe operation, such as that of suprapubic cystotomy. In a third case, though the patient ultimately recovered, still he was for some days in a very critical condition from the same cause.

From a consideration of the results in these cases, I resolved, when another of a similar nature came under my care, to try to temporarily arrest the bleeding by bladder drainage (for in the late stage of the disease the ordinary palliative treatment by astringents given internally and applied locally has not any effect whatever in checking hæmorrhage), in the hope that by doing so the patient might regain strength, and then after some interval be in a better condition to bear the more serious operation of removal of the tumour. Such an opportunity was not long in presenting itself. On Feb. 2nd Dr. Sawers Scott asked me to see a patient, first seen by him a few days previously, whom he believed to be suffering from a tumour of the bladder. The patient, a male, aged fifty years, gave the following history. Three years ago he was seized with hæmaturia, the attack continuing for about four months; the bleeding then ceased, and there was no recurrence until about six months ago, when profuse hæmaturia again set in and continued without intermission ever since; latterly micturition had become extremely painful and very frequent. When seen the patient was in a very prostrate condition, being so weak that he could not raise himself in his bed, to which he had been confined for more than a month. There was extreme pallor of the skin and mucous membranes, not a vestige of colour remaining in the lips, which presented a livid appearance. The pulse, 136, was very small, feeble, and irregular. The urine which he was passing was of a dark-red colour, containing a very large quantity of blood. On exploring the

bladder with a Thompson's sound nothing could be felt, but on drawing off the urine it was noticed that the last portion contained more blood than the first, indicating that the bleeding was vesical in its origin. On removing the sound a small portion of growth was found caught in the eye of the instrument, which, examined under the microscope, showed most typical villi. The presence of a papilloma was therefore very clearly established. As it appeared certain that any attempt to remove the growth in the patient's extremely exhausted condition would prove unsuccessful, it was suggested that bladder drainage through a perineal opening should be carried out, simply with the object of arresting hæmorrhage, to be followed after a time by an attempt to remove the tumour itself. To this the patient consented, and the following day he was admitted into the hospital for more careful nursing than he could obtain at home. On admission, ice was applied over the pubes and introduced into the rectum, and large doses of ergot and iron were given internally, but without any effect whatever on the bleeding, which was very free. On Feb. 5th perineal urethrotomy was performed in the usual way. On passing the finger into the bladder, a soft sessile growth, apparently about the size of a Tangerine orange, was felt springing from the right lateral wall. For the reasons already mentioned no attempt was made to remove it, especially as this would have been impracticable without proceeding to perform suprapubic cystotomy. The bladder was washed out with hot boracic lotion, and a rigid lithotomy tube left in the perineal opening. The operation was followed by complete arrest of the bleeding. The following day the urine was quite clear, and afterwards remained so. The bladder was washed out daily with boracic lotion through the perineal tube, which was removed at the end of a week. The perineal opening was quite closed on the twenty-third day. The cessation of the hæmorrhage was followed by a rapid improvement in the patient's condition. The pulse, which during the first fortnight varied from 134 to 140, gradually came down to 84. He quickly regained strength, putting on flesh, and losing his pallid, anæmic appearance. He was up and walking about the ward at the end of a month, being quite free from any bladder symptoms, and a fortnight later left the hospital, being anxious to gain more strength, and promising to return as soon as there was any recurrence of the hæmaturia, for the purpose of having the tumour removed by suprapubic cystotomy.

The case illustrates the beneficial effect of bladder drainage in arresting vesical hæmorrhage when due to a tumour. Probably an important factor in the production of bleeding under these circumstances is the contraction of the muscular wall of the bladder; every contraction, by interfering with the return of blood from a vascular growth like a papilloma, must produce in it a condition of extreme congestion, which is probably only relieved by a giving way of the thin-walled vessels of the villous processes, and consequently by hæmorrhage into the interior of the bladder. With free bladder drainage the urine runs away as soon as it enters the viscus, and the latter, not being excited to contract by the presence of any urine, is kept in a state of physiological rest, which, as in this instance, was followed by a complete arrest of bleeding. This, of course, can only be temporary, but it has now continued for five weeks since the closure of the perineal opening, and as yet there is no indication of any recurrence of the hæmorrhage.

ANTIPYRIN AS AN ANODYNE.

By ARTHUR JAMISON, M.D.

ANTIPYRIN has been very greatly praised on the Continent as an almost perfect anodyne. I am fully aware that when a remedy does a very great deal of good it is often very new, and as time goes by it is found that the anticipations of the first trials are not realised. Hence I am very sceptical of the scores of remedies the business push of some energetic chemists keeps constantly before our notice; yet I think I have seen such relief from the use of antipyrin that I venture to bring forward the following cases.

CASE 1.—Mrs. A—, aged forty-eight, consulted me on Jan. 12th for profuse menstruation and many sympathetic symptoms, all obviously connected with the commencing

menopause, chiefly very acute backache and left frontal neuralgia. The uterus, except being rather heavy, was normal, and there were no signs of ovarian mischief. I prescribed bromide of potassium, ergot, and quinine. On the evening of the 14th the pain in the back seemed so acute that I found her rolling about the bed in agony, and I gave her a hypodermic injection of morphia. This gave her a good night, but made her dreadfully sick. During the afternoon of the 15th the pain returned even more severely. It was described as darting and jumping up and down the backs of both thighs as well as the back. I now, in addition to the mixture, gave her one-thirtieth of a grain of phosphorus. This eased the pain very much, but on the 17th she complained so much of the disagreeable eructations of the phosphorus that I thought I would try another anodyne, and decided to give antipyrin, which was administered in five-grain doses every half-hour. The relief was most marked, and after the third dose the pain suddenly stopped. She was able to get up that afternoon, and the period stopped on the 19th. The next period began on Feb. 10th. It was very profuse, and about four hours after its commencing the old excruciating pain was felt in the back and down the course of each sciatic nerve. She immediately had recourse to the antipyrin in the same doses as before, and it was just as successful in giving complete freedom from pain. The pain returned two days afterwards, but two doses stopped it. There were no bad symptoms from the antipyrin, the only thing noticeable being that when the first three doses had been taken the pulse fell to 56. It had no effect on the menstrual period.

CASE 2.—Mr. B—, aged sixty-one, a tall strongish-looking man, came to me on Feb. 1st complaining of constant pain in the left lumbar region, and shooting forward into the groin of the same side. He had been a police superintendent, and had to leave the force for chronic rheumatism. The lumbar pain had been constantly troubling him more or less for twelve years, was increased by walking, and for the last three months had been getting more and more severe. It was not worse at night, and was relieved by sitting; for the last two weeks, the moment he began to move, it increased so much that life was a torment to him. When awake he did not want to sit still perpetually, and, if he moved, his pain was so bad that he hardly knew what to do. He told me the pain came on one night in July, 1875, quite suddenly about 10 P.M., was very intense during that night, got easier towards the morning, and has been troubling him ever since. He has had in the interval many intercurrent attacks of rheumatism. He has passed four stones per urethram at different times, nearly the size of a pea, but longer and roughish, and he thinks his back was easier for a time after passing each concretion. He has now no pain in passing urine, nor any pain shooting into the testicle of that side, or over the pubes. Specific gravity of urine 1018, free from albumen, giving no deposit of phosphates, but a slight settling of urates. He can only get about with the aid of two strong sticks. He has had much treatment, has been to both Buxton and Bath, has had endless external applications, has tried galvanism, and lastly massage. Now, after hearing this long history, I felt that everything had been done that ingenuity could suggest, but, drawing a bow at a venture, I gave him antipyrin in ten-grain doses thrice daily, thinking I would add one more to the longish list of his advisers and not see anything more of him. On Feb. 11th he visited me again. He told me that on the day of his coming to see me, as the medicine was not nasty he took three doses, and had had that night two hours' refreshing sleep. This gave him a little confidence, so he continued taking the remedy, and found his pain diminish and his sleep increase. On Feb. 4th he could, to his surprise, get about with one stick. He continued to mend, and felt that day very much better, the pain not being half so bad as before; it was mostly in his groin. He was in such good spirits that he felt himself another man. His pulse, which had been 86 on his first visit, was now 70. On March 3rd I saw him again. This time he walked in without any sticks and had only a slight limp, and during the past week had hardly any pain. His pulse was now 64. I told him to discontinue the medicine, but to take it if the pain returned. On March 10th he came to say he was free still from pain in his back and groin, though he had had springes of rheumatism, but felt wonderfully well.

CASE 3.—I will only briefly mention this case. A barrister came to me who had long been a sufferer from temporal neuralgia. He now treated himself with quinine and