

Early Tubal Gestation.

A CLINICAL STUDY.

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THE following paper is an abstract from work originally presented as a thesis at Cambridge. I propose to submit a series of recent cases, and present the results arrived at from their consideration in a manner frankly based upon the able work of the late Dr. Hamilton Bell. Interest is, I think, added to his work, since the series is in direct continuation of his, and confirms his conclusions regarding the treatment of early tubal gestation.

Dr. Bell's paper was an answer to the series of cases published by Dr. Champneys in June, 1902. In this paper Dr. Champneys had endeavoured to show that the risks of adopting an expectant treatment did not outweigh those of abdominal section; in fact, that operation was too frequent, and often unnecessary, in cases of early tubal gestation.

Dr. Bell collected a series of 88 consecutive cases from the St. Thomas's Hospital Reports, the results of which were published in this JOURNAL in December, 1906. To his series I can add another 21, making a total of 109 cases. Only a large series can furnish really reliable results, and in this lies the difficulty, since a long series from the practice of one man necessarily means greatly changed methods during the time taken in collecting the series.

The present ideas on treatment are somewhat as follows:—

1. There is a general consensus of opinion with regard to the very serious cases, which show obvious signs of severe internal hæmorrhage, that there is only one course open, namely, immediate laparotomy. The dispute is confined almost entirely to the various types of less serious cases, such as the following:

2. In women presenting sufficiently obvious signs of a serious condition, such as the formation of a pelvic hæmatocele, and having as a rule had several attacks of severe abdominal pain, the general opinion is now in favour of operation without unnecessary delay, and, I think, the experience of this series will show that this opinion is justified.

3. There is another type of case where the treatment is perhaps most in dispute. These are cases in which the signs and symptoms are slight or have occurred some time before the patient comes under observation. It is probable that the ovum has perished and that the risk is over. It is from these cases that the largest number is chosen

for expectant treatment, a course which I shall endeavour to show to be by no means free from danger.

4. Lastly, there are cases in which the ovum has been retained for some considerable time. Even in such cases there is evidence that there is danger in leaving them to nature.

ANALYSIS OF CASES.

The cases submitted to abdominal section were 17 out of 21, *i.e.*, 81 per cent. In most of these operation took place within a day or two of admission, while in a few the serious condition of the patient necessitated operation within a few hours of admission. In 4 cases the abdominal section must be classed as secondary, since the interval between admission and operation was between 9 and 11 days. They were, in fact, watched for a week or so, and operated on because their condition was not considered satisfactory.

Vaginal section was not employed in any case of the series. In all cases operated upon the method was abdominal section; vaginal incisions were used only in one or two cases, at or after operation, for the purpose of drainage.

The cases in which there was no operation were 4, *i.e.*, 19 per cent.

There were no fatal cases.

Some points of special interest in individual cases may be mentioned.

No. 2. The bladder was drawn up remarkably high on the abdominal wall, for, in spite of precautions (the passage of a catheter and a bladder sound), it was opened quite high up. The association of disease on the right side, in which there was a small ovarian cyst and a hydrosalpinx, is worthy of note.

No. 4. In this case there was total cessation of symptoms for 17 months, and then for 10 weeks a recrudescence sufficiently severe as to render relief by operation highly desirable. A three months' foetus with membranes was removed.

No. 5. Possibly an example of double extra-uterine gestation, as the right tube contained a mole, while the left formed a hæmato-salpinx.

No. 7. A case of repeated extra-uterine gestation, the patient having been operated on two years previously for a tubal pregnancy on the opposite side. The later specimens showed the mole in the process of extrusion through the ostium abdominale.

No. 8. Showed the mole partly extruded into the abdominal cavity. Also fresh bleeding was caused by the manipulation, demonstrating that the delay of ten days had been distinctly dangerous, and showing clearly that the secondary abdominal section was justified.

No. 9. Illustrated one of the complications of abdominal section in these cases, namely, the collection of blood in the cavity left by

the operation and its infection from bowel, and the value of vaginal drainage. The alarming symptoms subsided after vaginal incision and drainage.

No. 10. Owing to a mistaken diagnosis the patient was curetted, and this was followed by serious abdominal symptoms.

No. 14. A case of repeated extra-uterine gestation. The first attack occurred in February, 1905, and the patient came up in October, 1906, in answer to a letter of inquiry—with symptoms of a second tubal pregnancy on the opposite side. The manipulation of the examination apparently ruptured the tube as it was followed by collapse so serious that operation was performed within a few hours. A mass of recent blood-clot and a foetus of 3 months' development were found in the abdomen.

No. 18. Illustrated the difficulty of diagnosis from a retroverted gravid uterus, and how only after great difficulty, even under an anæsthetic, was it possible definitely to locate the fundus of an abnormally small uterus pressed tightly behind the pubes.

The results of this series, arranged like Dr. Bell's, work out as follows:—

Number of cases	...	...	...	...	...	...	...	21
Fatal cases	...	...	...	...	...	...	...	nil
Cases left alone and recovered	...	...	...	...	...	...	...	4=19%
Vaginal sections	...	...	...	...	...	...	...	nil
Cases left + vaginal sections	...	...	...	...	...	...	...	4=19%
Abdominal sections:								
Primary	...	...	...	...	...	...	...	13=61·9%
Secondary	...	...	...	...	...	...	...	4=19%
Total	...	...	...	...	...	...	...	17=81%
Cases in which abdominal section was not done	...	...	...	...	...	...	...	4=19%
Mortality of all abdominal sections	...	...	...	...	...	...	...	nil

My series is so small that a more useful object is attained by adding my figures to Dr. Bell's:—

Number of cases	...	...	...	...	88+21=109
Fatal cases...	...	...	...	...	3+ 0= 3= 2·75 %
Cases left alone and recovered	...	...	...	...	9+ 4= 13=11·9 %
Vaginal sections	...	...	...	...	6+ 0= 6= 5·5 %
Cases left and vaginal sections	...	...	...	...	15+ 4= 19=17·4 %
Abdominal sections:					
Primary	...	...	...	...	67+13= 80=73·4 %
Secondary	...	...	...	...	6+ 4= 10= 9·17 %
Total	...	...	...	...	90=82·5 %
Cases in which abdom. section was	...	...	...	...
not done	...	...	...	...	19= 19=17·4 %
Mortality of abdom. section	...	...	...	...	3+ 0= 3= 3·33 %
	...	...	...	...	out of 90 out of 90

The experience of the foregoing series seems to justify the following conclusions.

There can be no question that cases with signs of severe internal hæmorrhage require immediate operation. The danger of delay was well shown by one of Dr. Bell's fatal cases (R.M.C. case 15, admitted July 1, 1900) in which the patient died of uncontrollable hæmorrhage although already in the hospital and in spite of immediate operation.

Much more difficult are the cases in which there is leakage from the tube and a slow steady trickle of blood, resulting in the formation of a pelvic hæmatocele. This was found in 10 of the cases operated upon in my Series or 58 %.

Probably in most of these the bleeding will not recur and hence in advocating operation one must admit that many cases which would probably have recovered without, will be submitted to operation, but I would maintain that we are not at present qualified to select our cases, and until we can do so with certainty, it is best to operate. I will illustrate the difficulty of selection by a reference to case 8 of my series (cp. p. 262). In this case the pelvis was found to be full of old and recent blood, and bleeding was still going on, a tubal mole being in the process of extrusion. The patient's severe symptoms had commenced three weeks previously—in three weeks extrusion was only partial and bleeding still continued; therefore for three weeks the woman had been in an extremely critical condition, the gravity of which could only be recognized when the abdomen was opened. At any time the tube might have ruptured under the strain of the growing ovum and the process of extrusion, yet this was a case of pelvic hæmatocele, part of which was old, which might have been selected for expectant treatment.

Most commonly, however, the cases so selected are those in which we imagine the ovum to have perished as all urgent symptoms have been absent for some time. The patients come up for vaginal hæmorrhage or symptoms arising from the presence of an abnormal mass in the pelvis, as pain or interference with defæcation or micturition. These patients are thought to have solved the problem by weathering their danger unattended and it is considered that they are correctly treated by avoidance of surgical methods. To this there are two chief objections.

(1) Hospital patients cannot be retained for more than a certain time, at the end of which they are discharged in exactly the same physical condition as regards their pelvis as when they entered the hospital, for the process of absorption is nearly always much too slow to be observed in hospital.

(2) They may have a recurrence of severe symptoms and we cannot at present tell when they will or will not.

Dr. Fairbairn published a case in this *Journal* in December, 1906, which illustrates the latter statement. The gist of the case is as

follows: The patient presented all the indications of a tubal abortion with the formation of a hæmatocele. There was an interval during which the urgent symptoms subsided and then after several weeks a return of the dangerous symptoms thus necessitating operation. The operation showed that the growth of the foetus must have continued after the formation of the hæmatocele.

This case illustrates our present inability to select cases for expectant treatment, since we have here proof of our inability even to diagnose with certainty the death of the ovum, much less to predict the future course of the condition.

Case 18 of Dr. Bell's series is instructive in illustrating the mistakes that can be made in selecting cases for expectant treatment. Admitted to hospital on September 6th, the patient eventually was operated on November 28th and was under treatment 129 days from the time of her admission. This case was selected as a suitable one for expectant treatment, yet no less than three months afterwards her symptoms became severe enough to warrant an operation, thus showing clearly that in her case, as in many others, the first line of treatment was wrong, though apparently indicated at the time.

Results.—There were three fatal cases in Dr. Bell's series and it is worthy of note that in two of these the uterus had been previously explored, a mistaken diagnosis having been arrived at outside. In both cases the result was infection of the hæmatocele and ultimately death of the patient.

Out of the entire series of cases under discussion, where abdominal section was the only treatment, there was only one death. The patient died of peritonitis and must be reckoned as one of the unfortunate cases of accidental infection at operation.

In my series, covering 18 months' work at St. Thomas's Hospital subsequent to Dr. Bell's paper, there was no death, though the operation rate (81 %) was nearly the same as in Dr. Bell's (83 %). The results show an improvement on his, but it might be admitted however that one fatal case in so small a series would have altered the figures considerably.

A change in methods shown by the newer series is the complete demise of vaginal section as a method of operative procedure. As a primary operative method it has shown itself to be dangerous and useless, and has recently been employed only as a method of drainage.

On the evidence of the foregoing series with the quotation of one or two additional cases, I have attempted to show that

(1) The tendency towards more frequent operation is justified and the results are much improved.

(2) That the risk of abdominal section is not greater than the risk of leaving cases without operation.

(3) That we are at present unqualified to select with safety cases for expectant treatment.