

TRANSPLANTATIONS OF ECTOPIC PREGNANCY FROM FALLOPIAN TUBE TO CAVITY OF UTERUS

By C. J. WALLACE, M.D., DULUTH, MINNESOTA

HERETOFORE it has been the advice of our best men that when ectopic pregnancy was diagnosed, during the early quiescent period, or when it has been discovered during an abdominal operation, it should be removed at once. This has been the rule followed for years. It has been accepted as the only thing to do. Why have we all these many years been so willing to deprive these little children of the right to live just because they were started wrong.

In this day of advanced surgery, with the art of transplanting different parts, and, in fact organs of the body, I wonder at the escape of so important a procedure, entailing so little danger, as the transplanting of an ectopic pregnancy from the fallopian tube into the uterus, thus permitting the child to develop and be born as was its intention before its progress was obstructed.

Before we go any farther let us look into the conditions and structure of the parts with which we are dealing. The anatomical structure of the fallopian tube is the same as that of the uterus of which it is a continuation—a serous coat, a muscular, and mucous coat. The inner or mucous coat is continuous with the lining of the uterus and at its free extremity with the peritoneum.

According to Edgar,¹ the pathology of ectopic gestation is in part as follows:

This includes changes in the ovum, foetus and uterus. The gestation sac is formed from the coats of the tube wall. The muscular tissue, instead of undergoing hypertrophy, often tends to disappear.

The attachment of the ovum does not differ from that in normal uterine pregnancy. A placenta forms, but the decidual structures are rudimentary; so that the chorionic villi penetrate readily into the gestational sac as far as the peritoneum.

If the foetus does not die, its tendency is toward poor development, and the various deformities and diseases noted in intra-uterine foetuses.

Exceptionally survival occurs and the child may be well developed. The collateral changes in

the uterus during ectopic pregnancy are the same to a certain extent as those found in normal pregnancy, even the formation of a decidua vera. If the ovum dies these changes are arrested; otherwise they progress, although at a much slower rate than in intra-uterine pregnancy. The decidua, however, do not keep pace with the uterus and are usually thrown off *en masse*, simulating abortion. Exceptionally they are retained to term, when so-called false labor occurs.

Thus we see that the early gestation in the tube is practically the same as in the uterus with the exception of its chorionic villi which extend deeper, or rather through into the muscular wall—due to the thinness of the parts in the tube.

Up to a certain point the tubal gestation is identical with the intra-uterine gestation. Up to a certain point the uterus keeps pace with the tubal gestation and actually forms a decidua, enlarges, softens, grows darker in color, and in fact takes on all the early features of pregnancy.

It is playing the part of a disappointed hostess. It had expected and was fully prepared to receive the fecundated ovum had it not been delayed. Even then it seems hopeful, and continues to develop, though slowly, and if the ectopic pregnancy goes on to full term the uterus will be seen at that time to be as large as a four months' natural pregnancy.

Does it not look possible then for an early tubal pregnancy to be transplanted into the uterus where everything is ready and waiting for it?

Nearly every surgeon who has done any great amount of work has come upon unsuspected cases of ectopic pregnancy while in the abdomen for other purposes. So far as I can learn, every one of these has been removed, together with the tube, without even an attempt having been made to save either. This has been the proper thing to do. Everybody did it. In some cases it is the only thing to do yet. Early diagnosis of ectopic pregnancy is next to impossible

¹The Practice of Obstetrics, by J. Clifton Edgar, 3d ed. p. 362.

unless it is accidentally discovered. And until someone finds a way to make a more definite diagnosis it will continue to be the method. However, when we do find an early case, where the tube is still in a healthy condition, not too badly distended, and all things favorable, I think we should make a supreme attempt to save the life of the growing child by opening the tube carefully and dissecting out the pregnancy intact and transplanting it into the uterus where nature intended it should go. It can be very quickly done. It does not endanger the life of the mother and may be her only chance to bear a child. In support of this theory I wish to report a case which will show without doubt that it can be done.

September 13, 1915, Mrs. W. J. W., age 27; housewife; American; of good appearance with dark complexion; menstruation regular; married five years; no children; no miscarriages; constipated; urine normal; nervous; pulse normal; temperature normal. Family history negative. Personal history negative except that she had been told by one physician she had a fibroid in the posterior wall of the uterus. I found this to be true. She was very anxious to have children. Her husband was a fine, clean, well built man, of good habits.

September 15, 1915. Operated on for fibroid and when abdomen was opened, we found an ectopic gestation in the left tube at outer part of isthmus. The tube was very soft and healthy, enlarged to the size of a walnut but not distended. The uterus showed the same shade of darkening color.

The fibroid was about the size of a large hen's egg and extended into cavity of uterus. On removing the fibroid I was compelled to make a clean cut incision encircling the tumor and into the cavity of the uterus, extending down to and involving the inner os. Knowing their anxiety for raising a child, I decided to try, at least, the only thing at hand—to transplant the ectopic pregnancy. I knew it could be easily removed from the cavity of the uterus if it did not grow to the wall and be retained

and nourished to full development. Had it failed to attach itself it could have easily been dislodged by the use of a curette.

However, I was not called upon to remove it as all went well. The tumor removed, I left the uterus protected while I carefully opened the tube and dissected the pregnancy out intact, being careful not to injure the sac in any way by keeping wide away and including part of the tube-wall. It came out very easily and was in size about equal to a large olive. It was at once placed within the cavity of the opened uterus and caught by two of the sutures of the inner row of plain No. 1 catgut used in closing the wound in the uterus. The tube was closed in like manner and left in place. The patient was watched carefully for any hæmorrhage, vaginal discharge, or signs of trouble for two weeks with no symptoms whatever.

She left the hospital on the 14th day after a complete recovery. The pregnancy went on normally to full term and resulted in the natural birth of a fine boy, fully developed and without a scar, May 2, 1916.

No doubt the raw surface of the edges of the wound in the uterus was instrumental in the perfect attachment of the transplant. They gave a good source of blood supply to the raw surface of the detached sac or tube-wall, thus enabling it to adhere readily.

I have not the least doubt that many such transplanted ectopic pregnancies will be reported in the near future.

We may and will have failures in this as in other transplantation procedures, but there is not the danger involved in this transplantation that there is in many of the others. Certainly it is worth the most extreme effort in favorable cases. At this time it is of course difficult to differentiate the favorable case and this matter must be left to the judgment of the surgeon. The condition of the tube and surrounding circumstances such as the stage of development, inflammatory conditions, adhesions, displacements, and wishes of the mother must all be considered.