PREGNANCY IN A RUDIMENTARY HORN OF A UTERUS DIDELPHYS

With concealed accidental haemorrhage

by

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Amongst all the malformations of the female genital tract, perhaps the rarest is a completely paired uterus with each member of the pair having its own cervix, opening into the corresponding member of the paired vaginae — that is uterus didelphys (pseudo) with double vagina. (Very rarely still the uterus, the vagina and also the vulva are absolutely distinct on the two sides — which is described as true uterus didelphys). The tubes, uterus and vagina are developed from the two Mullerian ducts; the two ducts usually become fused, except the uppermost parts which form the two fallopian tubes. The varieties of malformation encountered are very numerous and depend upon the extent to which development and fusion of the two halves, which should become blended, fail. In uterus didelphys there is a complete failure of fusion of the two Mullerian ducts.

The case to be presented as under had complete duplication of the uterus, cervix and the vagina along with a normally developed fallopian tube and an ovary arising from its own corresponding uterus — the right uterus and the cervix were well developed, but the left uterus was rudimentary and was attached to its corresponding vagina with an atretic non-canalised cervix. There was a recto-vesical fold of peritoneum connecting the rectum, with the bladder in between the two uteri.

There are 3 possible ways by which pregnancy can occur in a rudimentary horn — (1) through a small microscopic cervical canal, (2) through a transperitoneal migration of the spermatozoa, or (3) through a transperitoneal migration of the fertilized ovum.

The usual termination of a pregnancy in a rudimentary horn is rupture, but few pregnancies are on record which have continued to term also. Torsion of a gravid horn is an occasional complication.

This case records pregnancy in a rudimentary horn of a uterus didelphys (pseudo) which continued to 28 weeks of pregnancy and was complicated by the occurrence of concealed accidental haemorrhage.

Case Report:

Mrs. A. F. M. Para 3, 24 years of age, was admitted on the 9th March 1963 as an emergency case for 7 months' amenorrhoea with severe pain in abdomen.

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Received for publication on 11-11-63.

Her past menstrual periods occurred at regular intervals, every 28 days, and were of normal strength and duration without any dysmenorrhoea. She had had 2 full-term normal deliveries conducted by a midwife at home. There was no history of any vaginal bleeding occurring during the last two pregnancies.

The patient was in a condition of severe shock, with cold extremities and extreme pallor. Her blood pressure was 70/40 mms. of mercury, and pulse was very feeble with a rate of 140 per minute. The patient had not passed any urine for about 24 hours and on catheterization about 4 ounces of concentrated urine was collected, which was loaded with albumin.

Per abdomen, on examination, uterus was of 30 weeks' size of pregnancy, and was very tense, tender and rigid. Neither foetal parts could be palpated, nor foetal heart heard. There was no coagulation defect in the blood and the clotting time was 1 minute and 17 seconds.

On vaginal examination, the cervix was only one finger dilated with thick lips. It was displaced posteriorly towards the sacral promontary and a sense of fullness was noted both anteriorly and in the lateral fornices. It was very difficult to assess the size of the uterus, as the fundus could not be defined because of the extreme rigidity and tenderness of the abdomen; but it could be assumed, by assessing the side walls of the uterus with the finger, that the size was not more than of about 10 weeks' pregnancy. No foetal parts, placenta or membranes could be located by the examining finger through the dilated canal. The patient soon after passed an intact triangular decidual cast (Fig. 2 C), which strongly suggested the presence of an ectopic pregnancy.

The condition of the patient was deteriorating very rapidly. Her blood pressure had fallen to below 60 mms. of mercury (systolic) with non-recordable diastolic pressure and the pulse became quite imperceptible and extremely rapid.

An immediate exploratory laparotomy was decided upon. The patient being in very poor condition to be shifted to the operation theatre, it was decided to do the laparotomy immediately on the labour bed in the labour ward itself under local infiltration anaesthesia with 2% procain hydrochloride solution.

After all the usual aseptic precautions, the abdomen was opened by a subumbilical median incision of about 4 inches long. As soon as the peritoneum was opened, a large sac, with dark portwine colour resembling couvelaire uterus, was visualised. The size was about 30 weeks of pregnancy. A small vertical nick was made on the anterior wall by a knife and was extended vertically by scissors to about 3 inches. The wall of the sac was made up of thin muscular tissue. As soon as the incision was made a large amount of blood gushed out with plenty of clots. The amniotic sac was then opened up and a 28 week sized dead male foetus, of 2 pounds weight, which was lying transversely, was extracted by breech. The placenta was lying completely separated in the sac. After emptying, the rudimentary horn failed to contract and remained flabby and atonic.

The rudimentary horn with foetal sac was connected by a thin band of tissue of about 3/4 of an inch size to the vaginal wall. This band of tissue was the non-canalised rudimentary cervix. The rudimentary horn with foetal sac had its own fully developed fallopian tube, ovary and round ligament which were found to be stretched anteriorly (on the foetal sac). The rudimentary horn with foetal sac could be easily removed by clamping the thin band of fibro-muscular tissue, cutting and ligating it. The band was solid without any canalization. The rudimentary horn with foetal sac and placenta is shown in Figs. 2 A, and B. A 10 weeks' sized healthy uterus was visualized on the right side with a normal cervix attaching it with the vagina. It had a normal fallopian tube, ovary and round ligament. There presented a peritoneal fold connecting the rectum and the bladder in between the right-sided normal uterus and left-sided rudimentary horn with foetal sac (the recto-vesical ligament) Fig. 1.

As soon as the rudimentary horn with foetal sac was removed, the condition of the patient improved rapidly. The blood pressure rose to 110/70 mms of mercury and pulse also settled down. The whole pro-

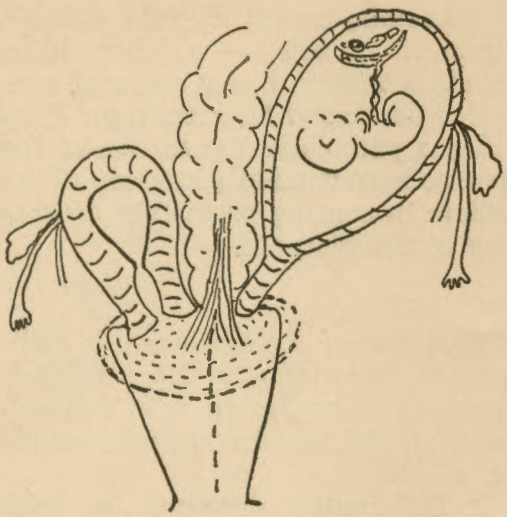

FIG. 1

Uterus pseudo-didelphys with pregnant rudimentary horn. The characteristic recto-vesical ligament is shown.

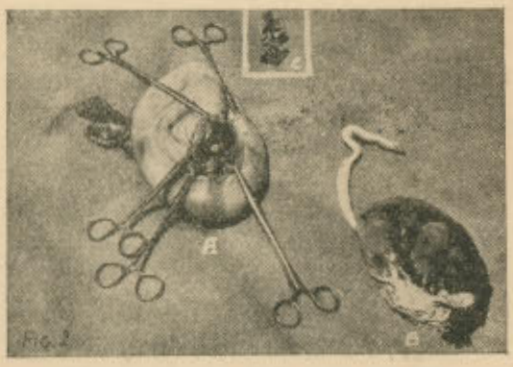

Fig. 2

A—Rudimentary horn with foetal sac. Size 9½ inches x 7 inches.
B—Placenta with cord and clots. Placenta size 6 inches x 4½ inches. Cord length 16 inches
C—Decidual cast. Size 4 inches x 1½ inches.

cedure lasted for less than 20 minutes. Throughout the operation blood was being transfused, about 900 mls. of blood being thus replaced.

There was no post-operative complication and the patient had a very satisfactory progress. The sutures were removed on the 7th day and the wound union was good. On the 9th post-operative day, a thorough clinical check up (per vaginam) was done. A torn sickle-shaped vaginal septum was present at the vault and a ridge of tissue was felt running medially on the anterior and posterior vaginal wall. The remnants of a vaginal septum must have been torn during the two previous full-term normal deliveries. A small nodule of tissue on the left side of the torn sickle-shaped septum without any hole or canal was noted. This was the rudimentary atretic non-canalized cervix.

The normal cervix was seen at the right side of the septum. A uterine sound could be easily passed into the right normal uterus. Thus there was a right normal uterus with normal cervix and a vagina of its own — and a left rudimentary horn with a rudimentary cervix and a patent vagina of its own, a case of uterus didelphys (pseudo) of which the left uterine horn was rudimentary.

The pregnancy was in the rudimentary horn and was complicated by concealed accidental haemorrhage.

An intravenous pyelography to exclude any urinary tract anomaly could not be done as the patient took discharge from the hospital against medical advice before it could be arranged.

Discussion

Although pregnancy in a rudimentary horn is rare, it can nevertheless prove disastrous to the patient and should be kept in mind when ectopic pregnancy is suspected.

In the majority of cases the foetal sac of a rudimentary horn ruptures in the 4th or 5th month of pregnancy. The time of rupture depends on how rudimentary the horn is, for the more rudimentary the horn the less will be the resistence to the chorionic villi and to distention. A correct diagnosis is extremely difficult, as great similarity exists between such cases

and cases of extra-uterine pregnancy. The diagnosis of an advanced case at or near term is even more difficult, as the rudimentary horn with foetal sac displaces the normal uterus and fills up the whole abdominal cavity. The signs and symptoms resemble those of an abdominal pregnancy. The absence of the characteristic superficiality of the foetal parts in abdominal palpation may lead to suspicion of a pregnancy in a rudimentary horn.

This case presented clinically all the signs and symptoms of concealed accidental haemorrhage and thus further complicated the particular diagnosis. The passage of a decidual cast strongly indicated the presence of an ectopic pregnancy. The treatment for an ectopic pregnancy or pregnancy in a rudimentary horn demands laparatomy — the correct diagnosis is fortunately of not much importance, but operation should not be delayed.

The correct diagnosis of "a concealed accidental haemorrhage in a 7 months' pregnant rudimentary horn of a uterus didelphys (pseudo)" was made only at laparotomy along with post-operative vaginal examination of the patient on the 9th day.

The causative factors leading to accidental haemorrhage could not be ascertained definitely as there was no history of trauma, there was no torsion of the horn, nor were there signs of toxaemia, except oliguria with albumin in the urine — which could be an effect rather than a cause of concealed accidental haemorrhage. Probably a pathological condition of the uterine horn itself might be one of the factors in causing premature separation of the placenta.

Summary

1. A case of a pregnancy in a rudimentary horn of a uterus didelphys (pseudo), complicated with concealed accidental haemorrhage is presented.

2. Differential diagnosis in brief along with seriousness of such a condition is discussed.

Acknowledgement

I am grateful to the Superintendent, Cama and Albless Hospitals, Bombay, for permission to record this case; and to Dr. Mrs. C. Kar, my senior colleague, for encouraging me to write this paper.

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