PREGNANCY IN RUDIMENTARY HORN OF THE UTERUS

Report of Two Cases

by

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Pregnancy in a rudimentary horn is a rare condition and, when is occurs, causes diagnostic difficulties because of varied signs and symptoms.

In his book DeLee records that a case of pregnancy in rudimentary horn of the uterus was first recorded by Vassal and Mauricean, as early as 1669. Sanger, in 1883, compiled a report of his cases and laid stress upon the natural course of such a pregnancy being rupture of the gravid horn at about the fourth month.

Eastman mentions that if the muscular tissue of a rudimentary horn is poorly developed, rupture occurs in the fourth month and may lead to death of the woman from intraperitoneal haemmorrhage; but if muscular tissue is abundant the pregnant horn may hypertrophy and pregnancy goes on to term. In such cases, if pregnancy is not removed by operative measures, it may be dissolved by suppurative process or converted into a lithopedian. The percentage mortality amongst the cases reported by Sanger in 1884, Kehrer in 1900, and by Bechman in 1911, was respectively 87.1, 47.6, and 5.5. It is now wellknown that this mortality rate can, however, be avoided by early diagnosis and proper treatment rendered immediately.

Muslow recorded nine cases without any maternal deaths. Out of 9 cases 4 pregnancies went to term. In one of 9 cases the pregnancy was in situe for 20 years while in another it was noted to be in situe for over 2 years. However, one case he reported was that of the sudden death of a woman in the fifth month of her pregnancy due to rupture of a pregnant rudimentary horn which actually was later diagnosed on autopsy.

Incidence

Holmes, in 1956, and Blair, in 1960, report that the incidence of this type of abnormality is one to two per thousand cases. Stevenson et al, in 1959, studied 983 consecutive cases of abortions. Four women had some degree of didelphys. In 1961, Wilson and Harris noted didelphys in 36 cases out of 15,697 women, who had delivered between January 1950 and December 1958 and the rate of this abnormality was estimated at 3 per 1000.

In 1961, the author working at Cama and Albless Hospitals, Bombay, came across two cases of pregnancy

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in rudimentary horn, with unusual features. These interesting cases are presented here.

Case I

M.S., Hindu, age 18 years, primigravida, was admitted on 6-1-61, with the history of irregular periods since April 1960, and pain in abdomen off and on, since then. Her last normal menstrual period was in April 1960. This was followed by amenorrhoea of three and half months' duration. She had profuse bleeding for 15 days in August 1960, accompanied by pain in abdomen and giddiness. During this period of amenorrhoea she had morning sickness, and breast signs, noticing increase in the size of the abdomen.

After the bleeding episode in August 1960, all these symptoms subsided and the menstrual period appeared for 5 to 7 days at the interval of twenty-five to forty-five days, till 20th December 1960, which happened to be her last menstrual period before admission.

The condition of the patient at the time of admission was good. Abdominal examination revealed no tenderness or evidence of mass. Vaginal examination revealed a normal sized uterus in retroverted position pushed to the right by a rounded mass of the size of an orange, smooth, firm, well-defined and mobile, in the left fornix; it was not tender. Right fornix was clear.

Investigations: R.B.C. 4.1 mil./cmm. Urine and stool: N.A.D., Hb.: 80%; Blood pressure: 90/60 mm. of Hg., Group O: IV. Rh: positive.

Pre-operative diagnosis of old ectopic or ovarian dermoid made.

On 9-1-61, under general anaesthesia, the abdomen was opened, the uterus and the right-sided tube and ovary were found to be normal, but a dark blue mass was found attached to the left side of the uterus by a broad base at the level of the internal os. It was diagnosed as rudimentary horn by the attachment of the left adnexa to the left of this mass. The horn was excised at its attachment to the uterus at the level of the internal os and the pedicles on the left side transfixed. The abdomen was closed.

Specimen: Smooth, rounded tumour—size 3″ in diameter, of dark blue colour which, when opened, revealed a well formed foetus of 3 months' size and placenta. There was no communication between the cavity of the horn and the uterus. The patient had an uneventful convalescence.

Comment: This case is interesting and considered worthy of report from the fact that all the signs and symptoms of pregnancy disappeared just as in a case of missed abortion. This was a fortunate termination as most cases of pregnancy in the rudimentary horn end in rupture and severe intraperitoneal haemorrhage. As the foetus had died in the rudimentary horn, some months earlier, the patient presented with this chronic mass in the left fornix, which was more suggestive of an ovarian dermoid. The mode of conception must have been the transperitoneal route either by spermatozoa or fertilised ovum.

Follow up in 1962, the patient had a normal pregnancy.

Case II

I.J., Mohamedan, age 36 years, was admitted on 12-5-61 at 8 p.m. in Cama and Albless Hospital, as an emergency case, with the history of four months' amenorrhoea, severe pain in upper abdomen and blood-stained vomits. She had these complaints off and on since last three months and had attended the out-patient department 3 weeks ago for treatment for the same and felt better with the usual mixtures. However, vomiting recurred after eight days and continued till the day of admission. This was accompanied by severe pain which resembled labour pains. On the day of admission, she was unable to pass urine and experienced severe unbearable pains (like labour pains) became cold and clammy, vomited dark-brown liquid and during the course of the day developed air hunger. She gave no history of giddiness, episodes of fainting or vaginal bleeding. O.H. Married 12 years; menarche at 12. Menstrual periods always regular. Para VI, first 7 months premature delivery—child expired after 6 days. Second full term normal delivery on 15-8-54. Baby 6 lb. 2 oz. died of small-pox at the age of one year and nine months. Third full term

normal delivery. Baby died of small-pox at the age of one year and four months. After the third pregnancy she developed amenorrhoea for about three years. After that she found her abdomen increasing in size and a pregnancy was diagnosed. In this fourth pregnancy she experienced no foetal movements. But the abdomen kept on increasing and reached the size of nine months pregnancy and then the size of the abdomen gradually diminished and she started bleeding per vaginam. After three months of bleeding per vaginam she was admitted in this hospital with the uterus of seven months' size. She was X-rayed and advised operation, but refused to undergo the operation. She went home against advice. In all she stayed in the hospital for one month and eight days. The bleeding continued for two or three months more and the size of the abdomen gradually decreased.

After that she was menstruating regularly. Her fifth pregnancy was in 1959 where she delivered at this hospital, baby, female, child living. The patient stated that the lump which had gradually decreased in size was noted and was advised caesarean, perhaps as it was diagnosed as ovarian cyst but she refused laparotomy and had normal vaginal delivery. This obstetric history was obtained on close questioning after the operation.

The patient's condition on admission was very low. She was cold and clammy with marked pallor, Pulse 118/mt. T. 97°, resp. 52/mt.; blood pressure 100/60 mm. of Hg. systolic murmur at pulmonary area.

Cardiovascular system: Tachycardia, Soft systolic murmur at pulmonary area.

Respiratory system: harsh breathing noted.

R.B.C. 3.2 million/cmil. Blood Group: B. II Hb. 52%.

The abdomen was rigid, with generalised distension and marked tenderness all over the abdomen. No definite swelling could be palpated. On vaginal examination the uterine body could not be made out separately from the swelling on the right side. Because of excruciating tenderness felt by the patient on moving the cervix and weak general condition and increasing air hunger, a diagnosis of intraperitoneal haemorrhage due to ruptured ectopic — probably rupture of rudimentary pregnant horn was arrived at, and immediate laparotomy under general anaesthesia was performed by the author.

On incising the peritoneum the blood gushed out. The mass brought out, showed the rupture in the uterus at the fundus with chorionic tissue attached to it. It was diagnosed as rudimentary horn by the attachement of appendages to its right side. The left horn was found bulky and soft with normal left appendages. The peritoneal fold was incised and pushed down, and a vertical incision made in the right horn, the cavity of which was occupied by a bony mass probably lithopedian. This was the remnant of the fourth pregnancy which must have occurred in this horn at that time.

Excision of the right cornu carried out. A sac containing a fresh foetus four months' size was found lying freely in the peritoneal cavity and removed. The round ligament was fixed to the left horn so as to keep it in anterior position. The abdomen was closed. The patient received 2 bottles of blood transfusion — about 600 ml. The patient's condition at the end of the operation was satisfactory and convalescence was uneventful.

Specimen: The right rudimentary pregnant horn was 5″ x 4″ x 3½″ in dimensions. There was a rupture 1½″ long at its upper border and placental tissue and blood clots were attached to it. In its cavity an old lithopedian was found containing calcified bones buried deeply into the uterine wall from which it could not be separated.

The amniotic sac contained a fresh foetus of four months' size.

Follow-up: Hysterosalpingogram done after 3 months reveals unicornis type of uterus with patent left fallopian tube.

The interesting features in this case are:—

(1) Conception occurring in a rudimentary born that already contained a lithopedian and moreover the horn could not simulta-

neously accommodate two conceptions, a fresh and an old one hence it ruptured.

(2) The uneventful fourth pregnancy which started in the rudimentary horn went up to nearly full-term and ended in lithopedian formation which remained dormant for nearly five years.

(3) The patient had a normal pregnancy in between two conceptions in rudimentary horn.

Discussion

Hunter, in 1957, quotes a case reported by Stabler in 1955 where a woman pregnant for twelve months felt no foetal movements during the last five months. Medical induction failed and the patient went home. In between she had a normal delivery and six months following that F. Murray delivered a grossly macorated foetus by caesarean section and performed a hemi-hysterectomy.

The mode of fertilisation is transperitoneal migration of either spermatozoca or the fertilised ovum. In both the cases under report, no communication could be seen between the rudimentary horn and the uterus. Nawal Kishore and Pathare reported a case in 1961, where a fine tunnel could be demonstrated between the horn and the uterus. A. Howard John in 1961, mentions the possibility of microscopic communication between the horn and the uterus by histological examination of the base of the cornu where 'a minute canal not visible macroscopically but lined by a simple tubal type epithelium surrounded by hyperplastic uterine muscle' was demonstrated. In the second case under report there was a definite obstruction caused by the presence of lithopedian. This however could only be proved by the histological examination of the horn removed.

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Fig. 1
Case 1—Rudimentary horn with a well formed foetus 3 months' size and the placenta.

Fig. 2
Case 2—Rudimentary horn excised with lithopoedion.

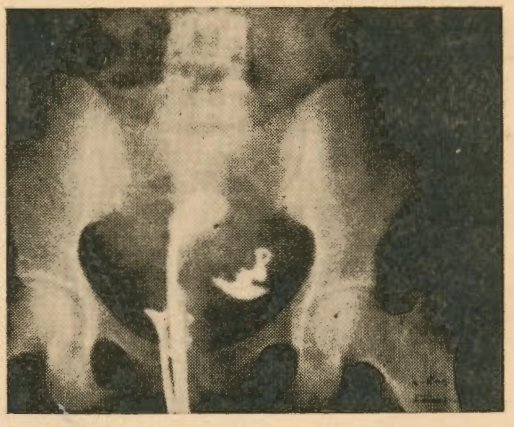

Fig. 3
Case 2—Post operative hysterosalpingography showing left horn with patent fallopian tube.