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CASE REPORT

Rupture of Rudimentary Horn Pregnancy : A Case Report

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ABSTRACT

A case of rupture of a noncommunicating rudimentary horn pregnancy is presented. The pregnancy ended in the first trimester with signs and symptoms of massive hemoperitoneum. An emergency exploratory laparotomy revealed rupture of enlarged rudimentary horn on the left side of the normal unicornuate uterus. Factor associated with pregnancy in a rudimentary horn and management are discussed.

Key word : Rupture of an noncommunicating rudimentary horn pregnancy.

In the normal healthy woman, her internal genital organs ; uterus, tubes, and upper portion of the vagina, are derived from midline fusion of Mullerian duct. Abnormality in the formation or fusion of the ducts causes anomalies of internal genital organs according to Buttram & Gibbon.[1]

Incidence of uterine anomalies is hard to estimate due to asymptomatic anomalies. Green & Harris (1976) reported incidence of uterine anomalies about 1 in 400 normal deliveries.[1]

A pregnancy in the uterine anomalies always causes many problems.[1] This report presents a pregnancy in a rudimentary horn of unicor-nuate uterus that has an incidence about 14% of uterine anomalies.[1] This incidence came from the report that used hysterosalpingography for diagnosis which may miss some anomalies, e.g. noncommuni-cating rudimentary horn. The incidence of a pregnancy in rudimentary horn of unicornuate uterus is about 1/5,000 to 1/150,000 of normal deliveries[2-4] which is 10 times less than the incidence of abdominal pregnancy. The pregnancy has high mortality and morbidity of the mother and fetus.[2]

Case Report

A 29 year-old pregnant woman, G4P3-A0, has been married for 8 years and hadprevious term normal deliveries. She had no history of dyspareunia, dysmenorrhea or pre-term deliveries. Her last menstruation was about 3 months ago. Urine pregnancy test was positive from a clinic one week prior to admission. She came to the hospital with left lower abdominal pain during sleep a night before. She had no bleeding from vagina, fainting or shoulder pain.

Physical examination revealed that the patient was in good consciousness, marked pale conjunctiva, mild tachypnea. Her body temperature was 36.5 C, pulse rate 78 beat/min., and BP was 110/60 mmHg. She develcped dizziness on upright position. Abdominal examination showed decreased bowel sound, shifting dullness, generalized tenderness, rebound tenderness.

Pelvic examination revealed pale vaginal mucosa without uterine bleeding. There was cervical tenderness, bulging cul-de-sac, but no palpable adnexal mass. Laboratory findings were as follows : Hct 15% white cell count 14,500 cell/mm N 96% L 4% platelet adequate, slighted hypochromic red cell, and normal urinary analysis.

The provisional diagnosis was ruptured tubal pregnancy with massive hemoperitoneum.

Treatment :

After resuscitation, emergency exploratory laparotomy was done and revealed a pregnancy in the left rudimentary horn of the unicornuate uterus with rupture. The other internal genital organs were normal, and the corpus luteum was in the right ovary. Total abdominal hysterectomy with right salpingo-oophorectomy was done.

Pathological findings : (S93-866) revealed left noncommunicating horn of the uterus, 7 cm. in diameter, which contained conceptive product. The horn located at the left side of fundus. Serial section did not reveal communication with the uterine cavity. There were chorionic villi and decidua in the horn cavity. Right ovary was 2.5 cm. in diameter, and contained corpus luteum.

The patient was investigated for an associated anomalies of the urinary system in the reco-very period, but the anomalies was not found. The patient was discharged from the hospital on the seventh day of admission.

Discussion

The patient came to the hospital with the signs and symptoms resembled to ruptured ectopic pregnancy with massive hemoperitoneum. The operation revealed a pregnancy in the rudimentary horn, a rare form of ectopic pregnancy.[5] The differential diagnosis prior to the operation between tubal pregnancy and pregnancy in the rudimentary horn is difficult. The anatomical difference between tubal and rudimentary horn pregnancy is the position of the round ligament which locates lateral to conceptus in rudimentary horn pregnancy.[2] This patient had unicornuate uterus and rudimentary horn with functioning endometrium but it was noncom-municating type (Mullerian Anomalies class II A1b).[1] This anomalies was found in 90% of unicornuate uterus and rudimentary horn with endometrium cavity.[1,2,6] Any pregnancy which occured in the noncommunicating rudimentary horn of unicornuate uterus must come from transperito-neal migration of sperm and ovum or fertilized ovum.[2,6] The corpus luteum was ipsilateral to the horn in 90-95% of case and contralateral in 5-10% of case.[2,6] In this case the corpus luteum was contralateral to the horn, so the mechanism of pregnancy was transperitoneal migration of fertilized ovum. Rudimentary horns were found 57% on the right side and 50% of cases were found in women with multiparity.[6,7] However, in this case the horn was on the left side and she was multiparity.

Reproductive performance of women with unicornuate uterus is difficult to evaluated due to rarity of the reported case. However there was a report showing an increase incidence of preterm labor, intrauterine growth retardation, breech presentation, dysfunctional labor and operative

delivery.[1]

There is an incidence of fetal demise about 98% of cases (89% ruptured 11% growth to term or near term before rupture) and fetal survival is about 2%.[2] In ruptured cases 33% occured in the first trimester, 61% occured in the second trimester, and 6% rupture taking place at term or near term.[2] There was a report of missed abortion, and lithopedian.[7] Most of the pregnancy in the rudimentary horn have symptoms and signs of massive intraperitoneal hemorrhage,[2-3,6-7] The other clinical manifestations were abdominal mass,[4] lower abdominal pain,[8-9] decrease fetal movement and labor pain[2] respectively.

The duration of pregnancy and the occurrence of rupture are partly depend upon the thickness of the rudimentary myometrium and its dsitensibility.[2-3] In most cases, pregnancy in the rudimentary horn terminates by missed abortion, or intrauterine fetal death. The contributory factors were decrease in blood supply, limited uterine distensibility and myometrial contrac-tibility.[2,9] Rupture is prone to occur later than with tubal pregnancy because generally a uterine horn has wall thickness greater than a tube and the whole clinical picture resembles the interstitial type of ectopic pregnancy.[2]

In most of the reported cases, the authors suggest that the horn should be removed whenever it is found.[2-11] A rudimen-tary horn can be removed by excision without interfering with future reproduction because it is just a fibrous band that connected between the uterus and the horn.[2-11] In this case, the horn could not be easily removed by simple excision because of the thickness of the stalk and increased blood supplies between the unicornuate uterus and the rudimentary horn. In the presence of an unruptured horn, extirpation should be per-formed when fetal viability is attained. The patient must be hospitalized and adequate amounts of cross-matched blood must be ready at all times.[2]

In some report the author suggests that total abdominal hysterectomy may be performed if the patient does not desire future fertility. If the patient wishes to maintain menstruation, removal of the horn with tubal interruption should be perform-ed. If the patient desires to retain her fertility potential, removal of the horn and ipsilateral salpingectomy is the procedure of choice.[11-12]

It is very difficult to distinguish between tubal pregnancy and rudimentary horn pregnancy. Less than 5% of case reported have been correctly diagnosed preoperatively.[2] At the present there is the usage of ultrasound especially transvaginal ultrasound in diagnosis of the rudimentary horn before or during pregnancy. Ultrasonic screening for uterine anomalies, has 43% sensitivity and 98% specificity but Magnetic resonance imaging may be more specific.[1]

The diagnosis of rudimentary horn must be keep in mind when a patient presents with intractable dysmenorrhea,[2] dyspareunia, hematometra, pregnancy with mass, pelvic endometriosis,[2,11] ovarian tumor, myoma uteri, PID,[7] or other genital anomalies.[2]

When the anomaly of the internal genital organ is found, urological evaluation is indicated because of the frequent association of urinary tract anomaly.[1] The anomaly of urinary tract system was not found in this patient.

Summary

An 29 year-old pregnant woman presented with signs and symptoms resembled to ruptured ectopic pregnancy with massive hemoperitoneum. An emergency exploratory laparotomy revealed rupture of enlarged rudimentary horn on the left

side of the normal unicornuate uterus. Total abdominal hysterectomy with right salpingo-oophorectomy was done and urinary tract evaluation was done but anomaly was not found.

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