

Unruptured Cornual Pregnancy

—A Case Report—

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ABSTRACT

Cornual pregnancy is very rare and its diagnosis is very difficult due to the distensibility of the uterus at the cornu. However, tender cystic enlargement at one horn of the uterus is suggestive of this type of ectopic gestation in this case.

A case is reported of unruptured cornual pregnancy, diagnosed before operation, with a review of the literatures.

INTRODUCTION

Cornual pregnancy is a specific variety of ectopic gestation which occurs in the rudimentary horn of the uterus (1, 4, 5, 7). The incidence is very rare and because of the location within the myometrium, there is greater room for expansion, and rupture occurs characteristically during the fourth or fifth month gestation.

A ruptured cornual pregnancy was described by Mauriceau in 1675. Since then more than 350 similar accounts have been reported, (11, 13) In Korea, 5 cases of the ruptured cornual pregnancy have been reported by several authors during the last 15 years.

Also, it is very difficult to make a diagnosis of cornual pregnancy before rupture. This

presentation is a case of unruptured cornual pregnancy diagnosed before operation.

CASE REPORT

A 29-year-old Korean woman, gravida 4, para 2, abortion 1, was admitted to the Department of Obstetrics and Gynecology Yonsei University Medical Center on April 30, 1975, complaining of amenorrhea of 8 weeks' duration and severe nausea. Her past and family history were uneventful. Two previous pregnancies resulted in live births and she had had one induced abortion. The last menstrual period was Feb. 28, 1975. Menses began at age 15, and occurred every 28 days, lasting 3~4 days. There has been no history of irregularity or dysmenorrhea. Twenty days before admission, she noticed omission of menstruation and nausea, so she went to a local clinic, where she underwent D&E to terminate her pregnancy. However, no conceptus material was obtained, and then Gravindex test was done with the result positive. Later she was referred to this hospital and admitted under the impression of unruptured cornual pregnancy. Her physical examination was within normal limits, except for a little evidence of discomfort. BP; 140/49 mmHg., pulse; 84/min., respiration; 20/min., BT;

37.3°C. On pelvic examination, the uterus was found to be normal, with a soft hen-egg size protruding mass on the left fundal side, and other pelvic findings were normal.

Laboratory findings; Hb; 12.6 gm%, Hct; 36%, WBC; 13300. segmented neutrophils; 84%, lymphocytes; 10%, urinalysis; WNL. Chest X-ray; minimal active pulmonary tuberculosis in the left upper lung field.

On the first hospital day, diagnostic laparoscopy was performed and the diagnosis of unruptured cornual pregnancy was substantiated. At laparotomy, the uterus was slightly enlarged with the left rudimentary pregnant horn (4.5 cm×5 cm×3.5 cm). Both tubes and ovaries were grossly normal. Simple hysterectomy was then performed. The postoperative course was uneventful and on the 7th day after operation the patient was discharged, still taking antituberculous drugs.

The pathologic diagnosis was also cornual pregnancy.

COMMENT

Frequently cornual pregnancy is termed interchangeably with "interstitial" pregnancy or, "angular" pregnancy (1, 2, 4, 5, 6). The former term, more properly, designates gestation within the interstitial portion of a fallopian tube. If the pregnancy develops adjacent to, or at the junction of, the tubal and uterine mucosa, it is an angular pregnancy, wherein the gestation sac is eventually extruded into the uterine cavity, often with continued growth of the embryo to term.

Cornual pregnancy is the least frequent variety of ectopic pregnancy and its occurrence is rare. Jarcho noted only 1 among 1225 ectopic pregnancies (9, 10). In a detailed review of

deliveries at the New York Hospital, Smith was able to uncover one case of a rudimentary horn pregnancy in 141946 deliveries (13). In Yonsei Medical Center, there were 1067 total cases of ectopic pregnancies for the last 14 years and 4 months, a frequency of one in 1067 ectopic pregnancies.

An interesting feature frequently mentioned in discussion of rudimentary horn pregnancy is the mode of fertilization. In approximately 90% there is no communication between the rudimentary horn and its more normal companion.

It has been described the possibility of pregnancy in a rudimentary horn as following. (3). 1. Ovulation and fertilization took place on the opposite side, and the fertilized ovum made an external migration to the tube near the rudimentary horn, and implanted in it. 2. Ovulation took place in the ovary corresponding to the rudimentary horn, while the spermatozoon effected an external migration, arrived at the opposite side and impregnated the ovum there (3, 12).

In general, ectopic gestation is rarely diagnosed before the tube rupture or hemorrhage takes place.

The manifestations of an unruptured cornual pregnancy are not characteristic. Often the patient is entirely symptomless, except for the subjective's usual complaints of pregnancy. Because most uterine horns are thicker than uterine tubes, rupture is likely to occur later than tubal gestation and hemorrhage is usually greater. Ruptures of the uterine horn occur mostly in the second trimester instead of in the first; about 10% go to term (4, 13). If rupture occurs, the signs and symptoms are those of a ruptured tubal gestation, except that shock appears rapidly and is more profound.

Accurate diagnosis of cornual pregnancy is seldom made prior to laparotomy. Vaginal palpation of an asymmetric uterus with a tender cystic swelling at one or other cornu should lead to a suspicion of cornual pregnancy. The significance of this finding is enhanced by the patients complaints of pregnancy and a history of amenorrhea. O'Leary reported that less than 5% of the cases reported had been correctly diagnosed preoperatively. And also he reported an analysis of 240 cases of cornual pregnancy as follows. (13).

Type and Outcome	Percent
Rupture	89
First trimester	33
Second trimester	61
Third trimester and term	6
Fetal demise	98
Secondary abdominal pregnancy	2
Term	11
Fetal death with sepsis	2
Alive at term, undelivered	2
Alive at term, delivered	1
Lithopedion	15
Death at term	80

Surgery is the only method of treatment and no delay should be tolerated once the diagnosis has been made, or the condition is suspected to be present. The type of operative procedure selected depends on the condition of the respective patient, especially when extreme speed is needed to save life, subsequent to rupture. A laceration associated with rupture of an cornual gestation of less than 8 weeks' duration can often be repaired by wedge resection of the affected cornual area, similarly to that performed with the usual salpingectomy. In the more advanced cornual pregnancy, the large area involved precludes resection, and hysterectomy is the indicated

procedure (2,8). It should always be performed more quickly and hemostasis is attained earlier than resection with repair.

The scar left by cornual resection may play an important role in future childbearing. The larger the resection, the more the scar is comparable to that of a classical Cesarean section or extensive myomectomy. It has been demonstrated that the latter types of scar prone to rupture during pregnancy and labor, so that patients who have had extensive cornual resections should be delivered preferably by elective Cesarean section (2).

Conclusion

In our case we were fortunate to establish the correct diagnosis of cornual pregnancy before operation, in a quiescent stage, thus preventing the possibility of serious complications.

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Fig. 1. Posterior aspect of unruptured cornual pregnancy.



Fig. 2. Same uterus with uterine cavity exposed.