Normal Pregnancy Associated with Hyperreactio Luteinalis (H.L.) : A Case Report

Surintip Piamsomboon MD,
Roungsin Chaovaratana MD.

Depertment of Obstetrics and Gynaecology, Faculty of Medicine, Siriraj Hospital, Bangkok, Thailand.

Abstract : *A case of large theca lutein cysts associated with normal pregnancy is presented. The patient came to Siriraj Hospital with symptoms caused by abdominal mass during pregnancy at 14 weeks of gestation. Bilateral theca lutein cysts were suspected during laparotomy. Right salpingo-oophorectomy and left ovarian wedge resection were done. Histological finding confirmed the diagnosis to be hyperreactio luteinalis. After operation the patient went on a normal course of pregnancy. Elective Cesarean section was performed at 38 weeks of gestation and result in a normal female fetus. The etiology of theca lutein cyst in this case was unknown. (Thai J Obeset Gynaecol 1994;6:117-120.)*

Key words : normal pregnancy, hyperreactio luteinalis

Multiple theca lutein cysts are usually found in associate with hydatidiform mole and choriocarcinoma.[1,2] Beside these, this kind of ovarian cysts can be found in few cases of fetal hydrops, secondary to erythroblastosis[3], twins pregnancy[4] or ovarian hyperstimulation syndrome[1,5]. Their appearance in normal pregnancy is usually rare[4,6]. This report showed a patient with massive bilateral ovarian enlargement. The histology confirmed to be a hyperreactio luteinalis. This was found from a singleton pregnancy in the absence of any medical complications or evidences of trophoblastic disease.

Case report.

J.J., a 38 years old, married, gravida 2, abortion 1, was admitted to Siriraj Hospital on July, 31, 1992. She complained of slighty bleeding per vaginam at 14 weeks of gestation that lasted for 6 hours. The patient has previously had one spontaneous abortion a year ago at 12 weeks of gestation.

A month previously, she complained of abdominal distension, excessive enlargement of the abdo-

men, dyspepsia and dyspnea. Peptic ulcer was diagnosed. She recieved antacid and antispasmodic medication. However, there was no improvement of the symptoms. Subsequent examinations revealed an excessively enlarged and distended abdomen. The pregnant uterus was enlarged upto 14 weeks of gestation in size. A vague cystic mass was found to occupy in almost the whole abdomen. Pelvic examination revealed minimal amount of old blood in vaginal canal and a closed cervical os.

Laboratory findings were within normal limit. The serum beta-hCG was 70,000 mIU/ml. Ultrasonography showed a single viable intrauterine fetus whose size was corresponded with gestational age. A normal appearance placenta, no maternal ascites; bilateral huge multiple cystic ovaries occupying nearly the whole abdomen was also reported. Diagnosis of pregnancy with suspect ovarian tumor was made and exploratory laparotomy was done on the following day.

Intraoperative findings revealed bilateral enlargement of the ovaries with multiple cystic formation. The cysts were varied in size (Fig. 1), thin wall with clear yellow and yellowish-brown fluid content. The right ovary was 25x20 cm^2 in size. During the operation, accidental ruptured of the right ovarian cyst occured with an uncontrol bleeding, leading to unavoidable right salpingo-oophorectomy. The left ovary was 15 cm. in diametre, wedge resection was performed for the diagnosis. The uterus

Fig. 1 Gross appearance of 14 week pregnant uterus and both ovaries. The ovaries contained multiple cysts with shiny and lobulated capsular surface. The right ovary was seen to be ruptured with active bleeding.

was consistent with the gestational age at 14 weeks.

Microscopic examinations of those ovarian tissue revealed multiple follicular cysts lining by luteinized theca and granulosa cells. (Fig. 2,3).

The postoperative course was unevenful. Serum luteinizing hormone and follicular stimulating hormone levels were normal, 2.2 U/L and 5.0 U/L respectively. The patient had undergone amniocentesis for chromosome analysis at 18 weeks of gestation and revealed a normal female karryotype, 46,xx. Follow up ultrasonography were performed during 28 and 34 weeks of pregnancy. The result revealed appropriate growth of the fetus and spontaneous regression of the left ovary to a normal size. The antenatal care after that was in a normal course. Elective Cesarean section was performed at the 38 weeks of gestation due to elderly primigravidarum. A normal female infant,

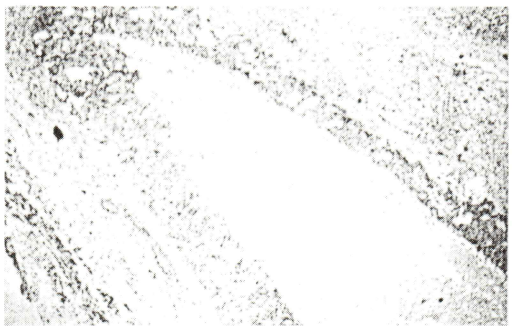

Fig. 2 Follicular cyst lined by luteinized theca interna and granulosa cell layers. (X20)

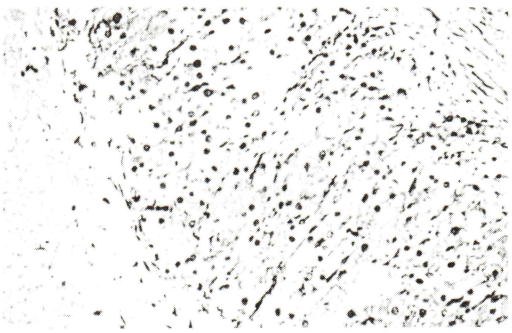

Fig. 3 Luteinzed lining cells. (X400)

weighing 3,420 gm. was born Exploration of the abdomen revealed normal left ovary. The placenta was 20x18x3 cm^3 in size and was macroscopically normal. Multiple sections of the placenta and umbilical cord were histologically normal.

Discussion

Multiple bilateral theca lutein cysts can be found in many different clinical situations. The ones that associate with hydatidiform mole, choriocarcinoma, Rh sensitization or twin pregnancy are characterized by a high incidence of elevated trophoblastic beta-hCG secretion.[1,7] In normal pregnancy, with normal hCG levels, the pathogenesis of this disease is unclear. It was believed to be caused by increasing sensitivity of ovarian stroma cells to the beta-hCG.[8]

Hyperreactio luteinalis is the pathologic term of multiple theca lutein cysts.[1] Both ovaries are usually involved. On gross inspection the capsular surface of the ovary is lobulated, smooth and shiny. Microscopic examination revealed follicular cysts with prominent luteinization of the theca interna, and also the granulosa cells in some case. The edematous stroma may also contain a large clusters of luteinized stroma cells.

The hyperreactio luteinalis may present at any stage of pregnancy, theoretically it should be found during early pregnancy, when the physiologic level of beta-hCG is high. Sometimes it may be found incidentally during Cesarean section.[4] Of these, when bilateral cystic masses were diagnosed during pregnancy, the crucial points of the managements was to recognize what the etiologies of ovarian enlargement were. The differential diagnosis included neoplastic disease of the ovaries. If the findings, either from ultrasonography or during laparotomy, are bilateral enlarged ovaries, multicystic thin wall with clear fluid content. The possibility of theca lutein cyst should be considered. Furthermore, Finding of theca lutein cyst should lead the physician to evaluate the uterine contents because of

the risk of trophoblastic disease and abnormal fetus are also very high too.[1,4,6]

This ovarian enlargement may associate with a considerable morbidity such as haemorrhage, torsion and rupture. The patient occasionally required surgery intervention for the diagnosis or management. Since this condition almost always regress spontaneously within a few weeks after parturition, so conservative management is enough for the theca lutein cyst.[1,7]

In this patient, ultrasonography revealed normal uterine content. The serum beta hCG level was appropriated to the gestational age. Laparotomy was performed for the diagnostic purposes and the resections of the large cystic ovaries were done. Unfortunately, during the manipulation of the right ovary, accidental rupture of the cyst occurred and the bleeding could not be controlled, necessitating salpingo - oophorectomy.

Conclusions

In normal pregnancy, large theca lutein cyst is uncommon. The differential diagnosis of the cause of theca lutein cyst is importance. Most of these are caused by the trophoblastic disease. The theca lutien cyst itself should be treated conservatively as it regresses spontaneously.

References.

1. Clement PB. Nonneoplastic lesion of the ovary. In : Kurman RJ, ed. Blaustein's pathology of the female genital tract. Third edition. New York : Springer-Verlag, 1987;471-515.
2. Montz FJ, Schlaerth JB, Morrow CP. The natural history of theca lutein cysts. Obstet Gynecol 1988;72:247-251.
3. Hatjis CG. Nonimmunologic fetal hydrops associated with hyperreactio luteinalis. Obstet Gynecol 1985;65: 11s-13s.
4. Caspi E, Schreyer P, Bukovsky J. Ovarian lutein cysts in pregnancy. Obstet Gynecol 1973;42:388-398.
5. Rosen GF, Lew MW. Severe ovarian hyperstimulation in a spontaneous singleton pregnancy. Am J Obstet Gynecol 1991;165:1312-1313.
6. Daane TA, Lurie AO, Barton RK. Ovarian lutein cysts associated with an otherwise normal pregnancy. Obstet Gynecol 1969;34:655-663.
7. Jones III HW. Gestational trophoblastic disease. In : Jones III HW, Wentz AC, Burnett LS, eds, Novak's textbook of gynaecology. Eleventy edition. Baltimore : Willams and Wilkins, 1988;863-893.
8. Bradshaw KD, Santos-Ramos R, Rawlins SC, MacDonald PC, Parker CR. Endocrine studies in a pregnancy complicated by ovarian theca lutein cysts and hyperreactio luteinalis. Obstet Gynecol 1986;67:66s-69x.