Hyperreactio Luteinalis in a spontaneous Singleton Pregnancy
Kuljit Kaur1, U. T. Bhosale2, S. S. Bhave3

1Post Graduate Student, 2Professor and HOD
3Professor, Department of OBGY, B.V.D.U. Medical College and Hospital, Sangli, Maharashtra, INDIA.

Corresponding Address:
mastalwaz@yahoo.co.in

Abstract: Hyperreactio luteinalis is a rare condition in pregnancy that is caused by high β-human chorionic gonadotropin (β-HCG) levels or abnormal sensitivity of the β-hCG receptor. It is mostly seen in patients with trophoblastic disease, multiple pregnancy or after fertility treatment. Here we report a case 24 year old female conceived spontaneously and small ovarian cysts in first trimester and full blown cystic masses in third trimester diagnosed during lower segment caesarean section. A wedge biopsy was taken to confirm the diagnosis. The postpartum period was uneventful. The biopsy reported it as hyperreactio luteinalis. Hence, the rarely seen asymptomatic condition may put the surgeon in dilemma for decision.

Keywords: hyperreactio luteinalis, pregnancy.

Introduction
Hyperreactio luteinalis represents a benign pregnancy-associated ovarian enlargement caused by multiple theca lutein cysts. It is usually discovered incidentally at the time of ultrasound, caesarean section or postpartum tubal ligation with the majority of cases being asymptomatic. Hyperreactio luteinalis is usually associated with trophoblastic disease. So far, 51 cases have been reported in literature. Abnormally raised levels of hCG have been implicated in the development of preeclampsia, HELLP syndrome, eclampsia and hypothyroidism. Upon diagnosis, conservative treatment, including minimal intervention with the cystic ovaries, is advocated. Theca lutein cysts may have serious complications like torsion of cyst necessitating laparotomy.

Case Report
A 24 year old female who was referred to the OBGY department of B.V.D.U. hospital, Sangli with history of 9 months amenorrhea and pregnancy induced hypertension and transverse lie. There was no significant menstrual history. In the past, patient had an intrauterine dead baby due to antepartum haemorrhage and pregnancy induced hypertension. On examination, her pulse was 80/min, and blood pressure was 140/90mmhg and on per abdomen examination- uterus was full term and irritable, foetal heart rate was 140/min and head was in right lateral grip and buttocks in left lateral grip. On per vaginal examination cervix was closed, uneffaced. No abnormal findings noted in cardiovascular system and respiratory system. Her sonography done in 21 weeks gestation revealed multiple cysts in ovaries, of size 12.19x6.05x11.74cm on right side and 11.42x8.06x8.36cm on left side. Patient was taken for lower segment caesarean section, and delivered a 2.5 kg female baby. On examining the ovaries, multiple cysts were noted, as bunch of grapes in Fig 1.

As seen in the picture, right sided cystic tumour measuring about 20x10x10cm and left sided about 20x11x9cm in size. A wedge biopsy was taken but the site of biopsy started bleeding profusely. In spite of all the efforts haemorrhage did not stop and ultimately bilateral tumour was removed leaving behind the normal portion of ovaries. And the specimen was sent to histopathology labs.

Figure 2a: Luteinized stromal cells present within the oedematous stroma.

Figure 2b: Follicular cyst wall lined by luteinized cells.
The gross and microscopic findings were suggestive of Hyperreactio Luteinalis.

Discussion
The presence of theca lutein cysts unassociated with trophoblastic disease is a rare benign condition also known as hyperreactio luteinalis. Burger described the first case of hyperreactio luteinalis not associated with trophoblastic disease, since when a few cases have been reported in spontaneous singleton pregnancies. In almost all cases it is triggered by very high endogenous or B hCG stimulation. An abnormally rapid rise in β-hCG in the first trimester or abnormal sensitivity of the HCG receptor due to a gene mutation can lead to the exceptional case of hyperreactio luteinalis in a spontaneous singleton pregnancy. Hyperreactio luteinalis is a rare condition that can occur at any stage of pregnancy but is typically seen in the third trimester.

Conclusion
Hyperreactio luteinalis is characterized by the presence of bilateral or unilateral ovarian enlargement due to theca lutein cysts usually found incidentally at caesarean section. Approximately 60% of the cases of hyperreactio luteinalis mimic ovarian neoplasms. Their anaplastic appearance may lead to unnecessary ovarian resection. They must be confirmed using ultrasound, MRI or a wedge biopsy and frozen section to avoid unnecessary resection. Recognition of hyperreactio luteinalis is important, since misinterpretation at laparotomy or erroneous histologic diagnoses has resulted in unnecessary surgery, often with sterilization of most of the cases. A conservative approach is indicated with wedge biopsy and frozen section diagnosis. Oophorectomy is necessary only to remove infarcted tissue or to control haemorrhage.

References