

## LUTEOMA OF PREGNANCY- A CASE REPORT

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### ABSTRACT

Pregnancy luteoma is a hyperplastic lesion that may be mistaken for a neoplasm, thus leading to unnecessary oophorectomy. Between 100-200 cases have been reported in the literature, although the true incidence is probably underestimated, as most of these lesions are likely to remain undetected. Pregnancy luteoma occurs in the second half of pregnancy and is usually an incidental finding at caesarean delivery or during post-partum tubal ligation. In rare cases, a pelvic mass has been detected or the lesion has become symptomatic because of torsion, rupture or obstruction of pelvic outlet during labour. Recently, cases have been detected by magnetic resonance imaging or sonographically. Pregnancy luteomas are associated with virilisation of the mother in about 25% cases, and female infants are virilised as well in 60-70% cases.

The case is being presented to create awareness and avoid unnecessary oophorectomy in a case of luteoma of pregnancy.

Key words: pregnancy luteoma, caesarean delivery

### INTRODUCTION

The luteoma of pregnancy was first described by Sternberg<sup>[1]</sup> as a tumor characteristically found in late pregnancy and composed of large acidophilic luteinized cells. Between 100-200 cases have been reported in the literature, although the true incidence is probably underestimated, as most of these lesions are likely to remain undetected<sup>[1,2,3,4,5]</sup>. Pregnancy luteoma occurs in the second half of pregnancy and is usually an incidental finding at caesarean delivery or during post-partum tubal ligation<sup>[1,2,3]</sup>. In rare cases, a pelvic mass has been detected or the lesion has become symptomatic because of torsion, rupture or obstruction of pelvic outlet during labour<sup>[4,6]</sup>. Recently, cases have been detected by magnetic resonance imaging<sup>[7]</sup> or sonographically<sup>[8,9]</sup>.

Pregnancy luteomas are associated with virilisation of the mother in about 25% cases, and female infants are virilised as well in 60-70% cases<sup>[9,10]</sup>. Although there have been divergent opinions as to the neoplastic nature of the lesions, consensus has been that they represent a dramatic reaction of the ovarian stroma to pregnancy hormones and that they pursue a benign course.<sup>[1]</sup> As such, they are believed to regress spontaneously in the postpartum period.

### CASE REPORT

A 24year old female underwent caesarean delivery during which a mass was discovered incidentally in the right ovary. It was suspected to be a neoplasm and hence right oophorectomy was done and sent to the department of Pathology, Andhra Medical College, for further evaluation.

Gross examination revealed a 9cmx6cmx4cm mass in the ovary grey-tan in colour, well-circumscribed, nodular and firm in consistency. On cut section, it was solid, grey-tan with hemorrhagic areas. (Fig 1&2)

Multiple sections were taken from the lesion and stained with haematoxylin and eosin. Microscopic examination of the lesion revealed round to oval cells arranged in sheets and trabeculae, forming follicle-like structures filled with eosinophilic material. Individual cells have plenty of eosinophilic granular cytoplasm with uniform nuclei and prominent nucleoli. (Fig 3&4 ) Features are consistent with LUTEOMA of pregnancy.

The patient did not have any signs of virilisation or any other complications during pregnancy and the baby too was normal. On follow-up for a period of one year too, we found that the patient or the baby did not develop signs of virilisation or any other complications.

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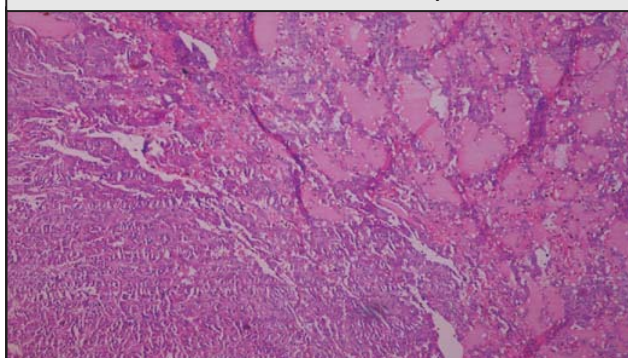
**Fig: 1** Gross examination showing a 9cm x 6cm x 4cm mass in the ovary, nodular and firm in consistency



**Fig: 2** On cut section, the lesion is solid, grey-tan and well-circumscribed, with hemorrhagic areas.



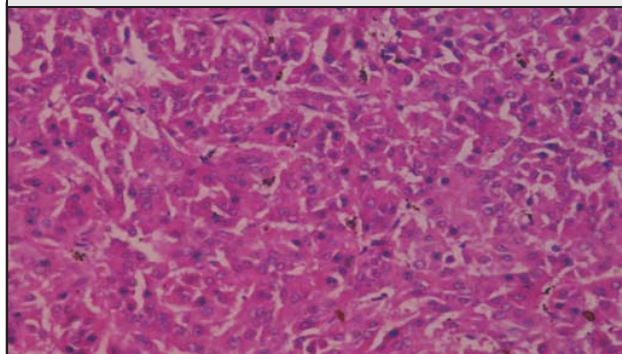
**Fig :3 (10X)** Microscopic examination of the lesion revealed round to oval cells arranged in sheets and trabeculae, forming follicle-like structures filled with eosinophilic material.



## DISCUSSION

As with our patient, the diagnosis of luteoma has rarely been made before operation. Most often, it is an incidental finding at the time of caesarean section or tubal ligation. Luteoma of pregnancy is a hyperplastic lesion which undergoes spontaneous resolution with termination of gestation.<sup>[1]</sup>

**Fig :4 (40X)** Individual cells have plenty of eosinophilic granular cytoplasm with uniform nuclei and prominent nucleoli



With respect to aetiology, Sternberg and Barclay are of the opinion that this tumor is a direct hyper reaction of the stroma lutein or theca lutein cells to human chorionic gonadotropin.<sup>[1]</sup>

Reticulum stains reveal that within the pregnancy luteoma, the reticulum fibres are sparse and surround small nests of cells. However, among the luteinized theca cells, the fibres tend to surround individual cells.

The reactive or hyperplastic nature of these tumours is supported by the fact that postpartum regression occurred in certain instances when only biopsy of the affected ovary or ovaries was carried out. Furthermore, no instance of persistence or recurrence of these tumours after termination of pregnancy was documented.<sup>[11]</sup>

Clinically, the fertility of the patients appears not to be affected by the presence of the lesion as shown by the high parity of many and subsequent normal pregnancies of some of these women. No coincident abnormalities have been identified which appear to be related to pregnancy luteoma.<sup>[11]</sup>

The question then arises as to the correct management. The clinician unacquainted with this entity is apt to remove it. If frozen section is requested, the pathologist unfamiliar with this entity may confuse the diagnosis with that of luteinised granulosa cell tumor.

## CONCLUSION

Pregnancy luteoma is a hyperplastic lesion that may be mistaken for a neoplasm, thus leading to unnecessary oophorectomy. This case is thus being presented to

create awareness about luteoma of pregnancy and emphasize that definitive surgery should be delayed pending the microscopic report of the wedge biopsy or frozen section of the lesion. If the lesion is a luteoma, no more need to be done.

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