

## Secondary abdominal pregnancy: A case report

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### ABSTRACT:

Abdominal pregnancy is a type of ectopic pregnancy where the gestational sac is implanted in the peritoneal cavity. It may be either a primary or a secondary abdominal pregnancy. Secondary abdominal pregnancies result due to early rupture of tubal ectopic pregnancy into the peritoneal cavity. Here we present a case of 28 year old G3P2L2 who presented to our hospital with secondary abdominal pregnancy with a dead fetus.

**KEY WORDS:** abdominal pregnancy, ectopic pregnancy

### INTRODUCTION:

Ectopic pregnancies are found in about 1-2% of all pregnancies. 95% of the ectopic pregnancies are found in the fallopian tubes.<sup>1, 2</sup> Abdominal ectopic pregnancies are even rarer with an incidence of about 1% of all ectopic pregnancies.<sup>3</sup> Abdominal pregnancy is implantation of the gestational sac in the peritoneal cavity.<sup>4</sup> It is of two types: 1) Primary 2) Secondary. Secondary abdominal pregnancy is the common variety among them.

Studdiford criteria for diagnosing primary abdominal pregnancies include the following:

1. Normal bilateral fallopian tubes and ovaries.
2. Absence of uteroperitoneal fistula.
3. A pregnancy which is related exclusively to the peritoneal surface and early enough to eliminate the possibility of secondary implantation following primary nidation in the fallopian tubes.<sup>5</sup>
5. Secondary abdominal pregnancies are resulted due to early rupture of tubal ectopic pregnancy into the peritoneal cavity.<sup>6</sup>
6. Abdominal pregnancy although rare are associated with high maternal and perinatal morbidity and mortality. We here present a case of secondary abdominal pregnancy which presented with fetal demise.

### CASE REPORT:

A 28 year old, G3P2L2, was referred from a private hospital in view of secondary abdominal pregnancy of 20-22 weeks with fetal demise. The patient had done urine pregnancy test in her 2nd month of amenorrhoea, confirmed pregnancy and took MTP tablets without confirmation of intrauterine pregnancy. She had spotting for two days followed by vague abdominal pain for 2

days. She had again gone for checkup in her 5th month of amenorrhoea where transabdominal ultrasound revealed a dead fetus of 20-22 weeks lying in the abdominal cavity. She was referred to our hospital.

In our Institute repeat ultrasound confirmed abdominal pregnancy with a dead fetus. On examination patient was haemodynamically stable with mild pallor. On abdominal examination a mass of 10×10 cm was present on the right side of umbilicus. Borders of the mass were ill defined and was extending up to right iliac fossa. It was soft in consistency and was found separately from uterine fundus. Bimanual examination revealed right and anterior fornices to be full. Cervix was deviated to the left side. Mass was found separately present from the uterus. MRI was done which showed a single fetus surrounded by amniotic membrane noted in the abdominal cavity in right lumbar, umbilical and right iliac region above the uterus displacing the adjacent bowel loops. No myometrium was visualized around the amniotic membrane. Placenta is seen in lower position in the right lumbar region, anterior and superior to the uterus with some part attached to anterior surface of uterus.

Exploratory laparotomy was planned after doing all the investigations. Intraoperative findings showed uterus was 14 weeks size and deviated to the left side. Gestational sac was found in right side of peritoneal cavity. It was adherent to the surrounding bowel loops by flimsy adhesions. Placenta was attached to the anterior abdominal wall. Placenta was pale in colour and fibrous. Amniotic sac was intact filled with thick straw coloured liquor. A dead fetus was delivered. Hemostasis was secured. Postoperative period was uneventful. Postoperative serum  $\beta$ -hCG was <2 mIU/ml. Patient was discharged on 12th postoperative day.

## DISCUSSION:

Primary abdominal pregnancy means an extra abdominal pregnancy where a fertilised ovum directly implants in the abdominal cavity. Secondary abdominal pregnancy is an ectopic pregnancy that ruptures with reimplantation within the abdominal cavity, which usually follows damage to the tubes, ovaries or scar on the uterus.<sup>7</sup> Risk factors for abdominal pregnancy are low economic status, subfertility, past history of ectopic pregnancy, pelvic inflammatory disease, hormonal methods of contraception, tubal reconstructive surgeries, tubal sterilization, genital malformations, pregnancy with intra uterine contraceptive device, multiple sexual partners and sexually transmitted infections.<sup>8,9,10</sup>

Symptoms of abdominal pregnancy may range from vague abdominal discomfort to severe bowel obstruction. The most common symptom is abdominal pain.<sup>11, 12, 13</sup> Other clinical manifestations of an uncomplicated abdominal pregnancy include non labour, suprapubic pain, bloody vaginal discharge, gastrointestinal symptoms, painful fetal movements, malaise and altered bowel movements.<sup>14</sup> Pre-eclampsia has also been found to be an associated comorbidity.<sup>15, 16</sup>

Most common signs are abdominal tenderness, abnormal fetal lie, easily palpable fetal parts, and displaced uterine cervix.<sup>17, 18, 19</sup>

Usually abdominal pregnancy is missed and diagnosed only after substantial emergency hemorrhage, which is because of less vascularised placenta, a weak gestational sac and myometrium which is not protected.<sup>16, 20</sup> Ultrasonography is the main method of diagnosing abdominal pregnancy.<sup>17</sup> It shows fetus lying without surrounding uterine wall, abnormal lie and or no amniotic fluid present between the placenta and the fetus.

MRI and serum alpha fetoprotein have also been used to diagnose abdominal pregnancy. Because of severe complications of secondary abdominal pregnancy, maternal morbidity and mortality are high. It is associated with massive hemorrhage, bowel obstruction, fistula and disseminated intravascular coagulation.

There is a high rate of perinatal morbidity and mortality too. Fetuses may have severe birth defects due to compression and vascular disruption resulting in torticollis, flattening of head, facial and cranial asymmetry, thoracic malformations, defective limbs, joint abnormalities or central nervous system malformations.<sup>17, 21, 22, 23</sup>

Treatment of abdominal pregnancy depends on the gestational age as well as the presentation. At early weeks of pregnancy methotrexate can be given. But according to Molinaro TA et al and Zinger M et al, some cases which were treated with methotrexate landed up in infection and had to be surgically removed by laparotomy or laparoscopy.<sup>21, 24</sup> At advanced gestational age, laparotomy had to be done. After delivering the fetus, placenta removal should be done after ligating the placental blood supply. If placental removal is not possible due to attachment to some vessel or organ, then placenta can be left in situ or partially removed. Serum  $\beta$ -hCG level has to be monitored. Methotrexate or embolisation can accelerate placental involution. But some studies disapprove methotrexate due to accumulation of necrotic tissue with greater risk of sepsis.<sup>22</sup>

Leaving the placenta in situ is related with various complications like secondary haemorrhage, intestinal obstruction, ileus, fever, infection, peritonitis and prolonged hospital stay.

Some studies advocate a delayed placental removal after intrauterine death which will lead to placental atrophy. But this needs a 3-8 weeks period of observation and also there is an added risk of infection and disseminated intravascular coagulation.<sup>11, 22, 25</sup>

Some abdominal pregnancies may reach full term, but most of the time it is accidental. Some abdominal pregnancy cases have been reported with a healthy baby delivered and also normal follow up.

## CONCLUSION:

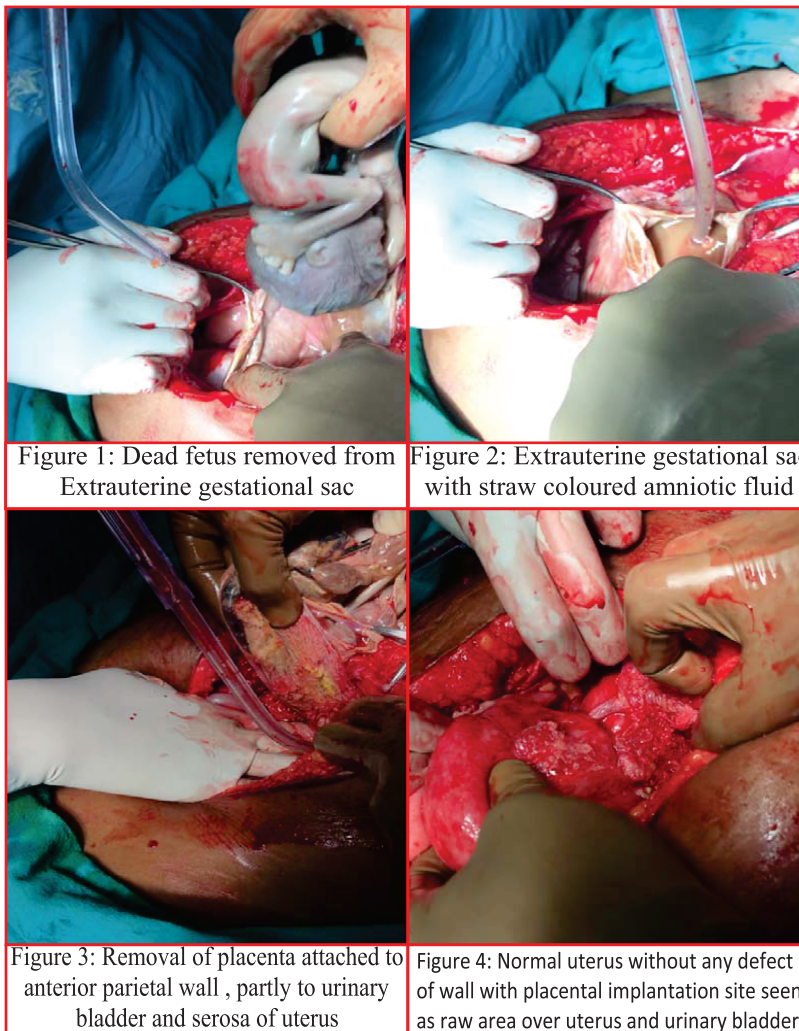
Abdominal pregnancy is a rare condition and also difficult to diagnose. Prompt pre-operative evaluation, availability of multidisciplinary surgical team and blood products and proper operative or conservative approaches should be employed for reducing maternal morbidity and mortality.

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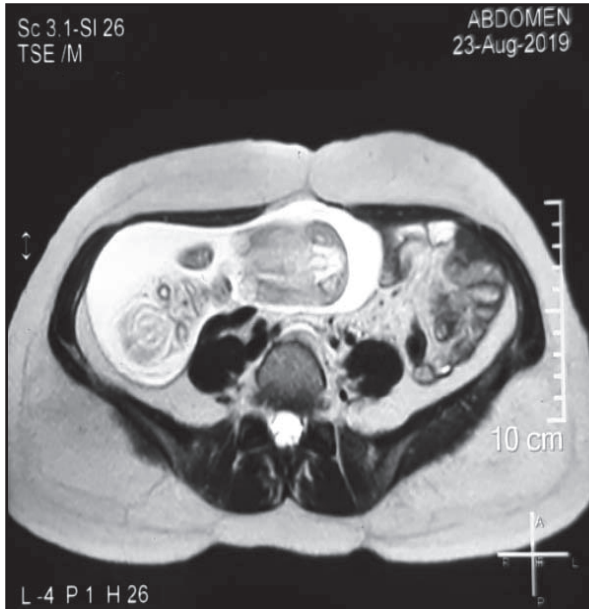


Figure 5: MRI(axial view) showing extrauterine pregnancy laying in abdominal cavity not surrounded by myometrium

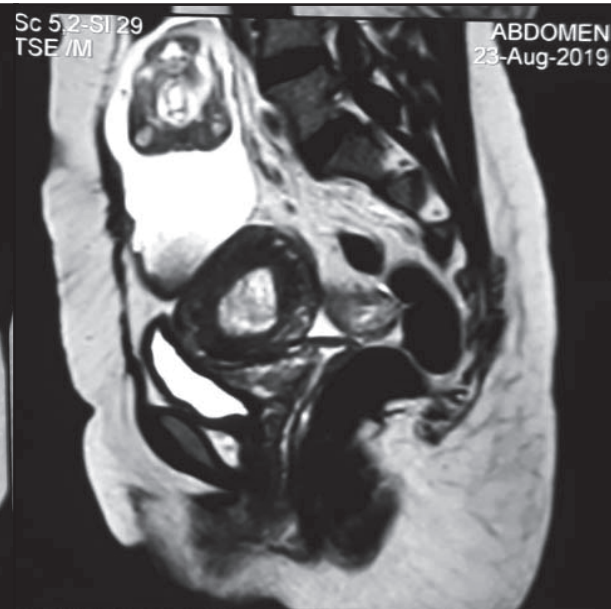


Figure 6: MRI(sagittal view) showing abdominal pregnancy and empty uterus

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