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## RESEARCH ARTICLE

### SPONTANEOUS DELAYED UTERINE PERFORATION IN A PRIMIGRAVIDA POST-CAESARIAN SECTION AN UNHEARD ENTITY

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#### ABSTRACT

To report a case of spontaneous delayed uterine perforation post-cesarean section in a primigravida. A 26 year woman came with the complaints of abdominal pain since two days. Detailed history revealed that she was a primigravida who had undergone an elective cesarean section six weeks back. Ultrasonography of the whole abdomen was performed followed by MDCT of abdomen and pelvis on a 128 multi slice scanner for imaging evaluation of the patient. Ultrasonography revealed moderate amount of free fluid in the lower abdomen. Further a contrast enhanced Multi-detector computed tomography scan revealed loculated collections in the pelvis and a rent along the right postero-lateral wall of the uterus which also showed endometrial collection with within. Surgical exploration confirmed the uterine perforation and pelvic collections. Surgical repair of the uterine rent and peritoneal lavage were carried out. A spontaneous uterine perforation in a primigravida after weeks of uneventful post-cesarean recovery period is not documented in current English literature, hence we are lead to share our imaging findings to create medical awareness of such an entity.

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#### INTRODUCTION

Spontaneous uterine perforation is an extremely rare medical entity. The leading cause of uterine perforation is pyometra caused by cervical malignancy. We present a case of a patient who had undergone an elective cesarean section followed by uneventful post-operative recovery course of six weeks prior to presenting to our department with an acute abdomen. Diagnostic imaging modalities like USG and MDCT lead to an accurate diagnosis of spontaneous uterine perforation in such a scenario which is an extremely rare case encountered in medical literature.

#### MATERIALS AND METHODS

Ultrasonography of the whole abdomen was performed followed by MDCT of abdomen and pelvis on a 128 multi slice scanner in order to obtain maximum diagnostic output and minimise the dose of radiation.

#### Case report

A twenty six year old woman who was admitted in the obstetrics and gynecology ward was referred to our department with the complaints of abdominal pain since two days.

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Detailed past history revealed post-cesarean section done six weeks prior to this presentation. On clinical examination the abdomen was soft on palpation with tenderness in the lower abdomen. USG of the abdomen and pelvis was performed as advised for further evaluation. The USG revealed enlarged post-partum uterus with a hypoechoic collection within the endometrial cavity which showed few internal echoes & dirty echogenic shadows within. Multiple pockets of hypoechoic collections were also observed in the pelvis. A provisional diagnosis of bulky post-partum uterus with pyometra and moderate hypoechoic collection in the pelvis was made. This raised a suspicion of spontaneous perforation of the uterus. A MDCT scan was further performed and confirmed the findings of USG. In addition multiple loculated collections were seen surrounding the uterus and a suspicious rent in the uterine musculature was seen along its right postero-lateral aspect. Moderate bilateral pleural effusions were also observed. A radiological diagnosis of Pyometra with spontaneous perforation of uterus and surrounding loculated collections within the pelvis was made. Considering the radiological diagnosis the surgeon performed an exploratory laparotomy under high spectrum anti-biotic cover and imaging findings were confirmed post-operatively.

#### DISCUSSION

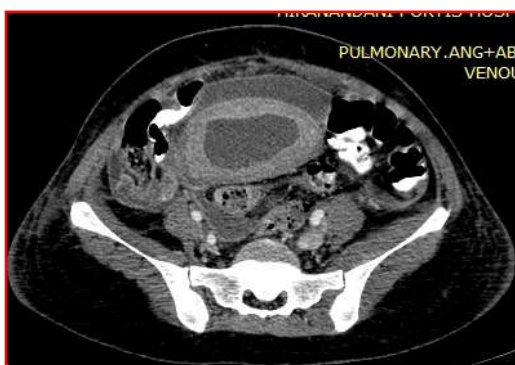
Pyometra is an infected collection within the endometrial cavity.



**Figure 1. CT Coronal image of the pelvis reveals an uterine rent along the right postero-lateral wall of the uterus indicative of uterine perforation**



**Figure 2. CT Coronal image of the pelvis reveals pyometra and adjacent multiple loculated collections**



**Figure 3. CT Axial image of the pelvis reveals pyometra and adjacent multiple loculated collections**



**Figure 4. Axial image of the chest reveals bilateral pleural effusions**

There are various causes of pyometra commonest being cervical malignancy, radiotherapy for genital malignancies, other benign pathologies like endometrial polyp, fibroids, puerperal infection, cervicitis and also congenital cervical anomalies (Gay Francisco, 2005). USG is the first investigation of choice & carries a high sensitivity for pyometra, however has a limited role in the diagnosis of uterine rupture (Saha, 2008) MDCT carries a high sensitivity for both pyometra, uterine rent detection & abdominal collections which were evident in this case (Hui, 2000). Perforated pyometra is a surgical emergency with laparotomy, peritoneal lavage & repair of uterine perforation / hysterectomy is the appropriate & adequate line of management (Nikunj, 1995). In our case high index of suspicion, multi-modality imaging correlation lead to an early diagnosis and appropriate treatment initiation which lead to decrease in the morbidity and saved the patient from a high risk of mortality.

### Conclusion

Accurate prompt diagnosis, early intervention and appropriate aggressive treatment can significantly decrease morbidity and mortality in cases of uterine perforation. Although unheard of spontaneous perforation of uterus due to a pyometra following uneventful recovery period of many weeks post caesarian section does occur as seen in our patient and high index of suspicion with appropriate intervention attributed to saving our patients life. Hence, spontaneous uterine perforation due to a pyometra formation over a period of uneventful post-caesarian section although unheard of should be considered in patients who present with acute abdomen post-caesarian.

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It is an extremely rare entity with an incidence of 0.1-0.5% of all gynecology patients. Spontaneous rupture of uterus due to a pyometra is also a very rare complication (Kavak, 2006).