A Case of Uterine Perforation with Successful Conservative Laparoscopic Management

K. Sheila Pillai[1*], S.Bhuvana[2], Jaya Vijayaraghavan[3], Naveen Alexander[4]

{[1]Assistant Professor, [2]Associate Professor, [3]Professor and HOD, Department of OBGY}

{[4]Associate Professor, Department of General Surgery}

Sri Ramachandra Medical College and Research Institute, Porur, Chennai, Tamil Nadu, 600122 INDIA.

*Corresponding Address:

drsheilasunil@hotmail.com

Case Report

Abstract: We are presenting a rare case of uterine perforation with delayed diagnosis which was successfully managed conservatively with laparoscopic guidance. The patient came to us as a referred case with high grade fever and lower abdominal pain of one week duration. She had a history of dilatation and curettage one week back for missed miscarriage. Both pelvic ultrasound and CT showed adnexal mass lesion with air pockets suggestive of abscess. She was taken up for emergency laparoscopy which revealed pelvic abscess walled off by omental and bowel adhesions along with perforation on the upper part of the posterior surface of uterus with extensive sloughing. In view of the nulliparous status of the patient it was decided to preserve the uterus under stepped up antibiotic cover.Thorough peritoneal wash was given and intraperitoneal drain was kept. Patient was intensively monitored. Though she developed features of evolving sepsis prompt critical care management resulted in her steady recovery without undergoing hysterectomy. High index of clinical suspicion along with aggressive tertiary care facilities helped to salvage the patient.

Keywords*:* Laparoscopy, pelvic abscess, uterine perforation.

Introduction

Uterine perforation following surgical evacuation of gravid uterus, with late recognition, though not very common is still encountered occasionally. We are presenting a referred case of perforation of uterus with pelvic abscess, which occurred following surgical evacuation of uterus done for missed miscarriage in late first trimester.

Case report

23 year old lady came to casualty with complaints of intermittent high grade fever with chills and rigor and lower abdominal pain for the last one week. She had history of dilatation and evacuation done eight days back in an outside hospital for missed abortion at eleven weeks amenorrhoea. She also gave history of diagnostic laparoscopy done for primary infertility about thirty days after her LMP and the urine pregnancy test became positive one week after the laparoscopy. She was married for two years and had history of irregular cycles (5/35-40).She had a pelvic ultrasound scan and also a CT scan pelvis done two days back which showed right adnexal mass lesion 6.7cmx3.6 cm with multiple air pockets suggestive of abscess. On examination she was febrile with mild tachycardia and normal blood pressure. There was tenderness in the umbilical and suprapubic region. Bowel sounds were present. Cervix appeared normal with minimal bleeding through the os. On bimanual pelvic examination, uterus was tender with forniceal tenderness and cervical motion tenderness. Blood and urine investigations were sent and she was started on broad spectrum intravenous antibiotics (ceftriaxone and metronidazole). She was kept nil by mouth and was started on intravenous fluids. Transvaginal scan pelvis showed mass of 8x6 cm on the posterior aspect of uterus more on to the right side with multiple air pockets suggestive of pelvic abscess. Endometrial thickness was 6mm.Her blood reports showed mild anaemia (hemoglobin 9.6 gm/dl) and leukocytosis with polymorphonuclear cells predominating(15400 cells/mm3 with P 91%) .All other baseline investigations were normal. She had persistent fever spikes. Surgical opinion was taken and she was planned for emergency laparoscopy and to proceed, with a provisional diagnosis of pelvic abscess with probable perforation of uterus.Flimsy adhesions of omentum and bowel were noted on to the fundus and posterior surface of uterus. Walled off pelvic abscess with about 100ml pus collection was observed on releasing the adhesions. Perforation was seen on the upper part of the posterior surface of uterus with extensive sloughing of the surrounding uterine wall. The pus was drained and the sloughed off uterine tissue was removed. Pus and sloughed tissue were sent for culture and sensitivity. Thorough saline peritoneal wash was given. Bilateral fallopian tubes and ovaries could not be visualized separately. In view of the nulliparous status of the patient a combined decision was made to preserve the uterus and continue conservative management under stepped up antibiotic cover. After adequate counseling of the

patient's attenders about the plan of management, intraperitoneal drain was kept and port sites were closed. She was started on intravenous piperecillin/tazobactum and metronidazole. She was intensively monitored postoperatively in the high dependency unit. Attenders were counseled about the probable need for laparotomy/hysterectomy/ intensive care unit care/ ventilatory support that could arise in the event of any deterioration of her condition.On postoperative day 1, fever spikes persisted and she developed breathlesness with features suggestive of progressive sepsis. She was shifted to intensive care unit for further critical care with ventilatory support.Antibiotic was further stepped up to intravenous imipenam.Blood and urine cultures sent at admission showed no microbial growth. The pus ,and sloughed tissue sent intraoperatively and the repeat blood sample sent on postoperative day 1 grew E. Coli sensitive to piperecillin and amikacin and hence subsequently intravenous amikacin was added.She became afebrile from postoperative day 3 and started recovering slowly. The intraperitoneal drain and the urinary catheter were removed on postoperative day 7.She was discharged on postoperative day 10 after removing port site sutures.She has been put on oral contraceptive pills from then on for the last four months and is on regular follow-up.

Discussion

Uterine perforation is a dreaded complication of all intrauterine procedures.It may be further complicated by haemorrhage and sepsis.Uterine perforation can be associated with injury to blood vessels and surrounding viscera .The risk of uterine perforation is enhanced by conditions like pregnancy,menopause and cervical stenosis.The incidence of uterine perforation is often underreported as many cases are not recognized or confirmed.For first and second trimester abortions (both induced and spontaneous) the risk is estimated as approximately 5/1000[1].It occurs most often during mechanical cervical dilatation or insertion of a sharp instrument.Distortion of uterine anatomy, uterine malposition and scarring of endocervical canal increase the risk further. It occurs most commonly at the fundus of the uterus[2,3]. Patient prior to surgical evacuation of the uterus should be adequately counseled regarding the procedure and informed consent should be obtained. The risk of uterine perforation and the probable need for additional procedures (laparoscopy or laparotomy) that may arise, should be clearly explained.Clinical examination should be meticulously performed to confirm the size and position of the uterus. The gestational age should be properly ascertained with ultrasonogram. Adequate cervical preparation must be done using misoprostol 400 microgram administered vaginally three hours prior to the procedure [4].Antibiotic cover should be given(4).If the cervix cannot be dilated with gentle force, ultrasound guidance can be utilized to safely dilate the cervix and gain access into the uterine cavity.Vacuum aspiration is the method of choice and the uterus should be emptied with the suction cannula and blunt forceps if required.The procedure should not be routinely completed by sharp curettage[4]. Perforation should be suspected when any operating instrument passes beyond the expected length of the uterus. Excessive bleeding, haematuria and the appearance of fat or omentum in the suction cannula are indicators of perforation with vascular or visceral injury. Perioperative hypotension could be the first sign of occult intraabdominal or retroperitoneal haemorrhage. Severe or persistent pelvic or abdominal pain,fever, abdominal distension and persistent bleeding per vaginum in the postoperative period should produce the suspicion of uterine perforation.In one series of 15 women who developed uterine perforations at second trimester dilatation and evacuation, unexpected pain was the most prominent symptom[5].Uterine perforation cannot be confirmed or excluded with any imaging study. In patients with anaemia, fever and /or pelvic mass or tenderness, pelvic ultrasound may be useful to identify haematoma or abscess. In the case we are reporting, the patient had persistent pain abdomen post evacuation and started developing fever spikes. She was referred to us 8 days after the procedure with pelvic abscess. She was taken up for diagnostic laparoscopy which revealed the perforation and the pelvic abscess. Even though the uterine wall surrounding the perforation showed extensive sloughing which would have otherwise favoured a decision of proceeding with hysterectomy, we decided to defer it at that point as the patient was nulliparous. Laparoscopy helped to reduce the perioperative morbidity and also facilitated faster recovery inspite of the patient going in for sepsis related complications. The experience of the surgeon was invaluable in confirming the integrity and viability of the bowel laparoscopically. Tertiary care facilities coupled with effective critical care management helped in the patient recovering from a moribund state without undergoing hysterectomy.

Conclusions

Uterine perforation though rare, can occur during surgical evacuation of pregnant uterus.Careful postoperative followup helps early detection of cases.Laparoscopic evaluation and conservative management, in judiciously chosen cases have a definite role in avoiding hysterectomies especially in patients who are yet to complete their families.Early referral to tertiary care facilities and a multidisciplinary approach to patient care go a long way in salvaging these patients.

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