Gynecol Surg (2011) 8:359–361
DOI 10.1007/s10397-010-0581-4

SHORT COMMUNICATION

Fallopian tube incarceration complicating surgical termination of pregnancy

Rasiah Bharathan · Shreelata Datta · Shalena Phakey · Naim Boutrous

Received: 10 March 2010 / Accepted: 22 March 2010 / Published online: 13 April 2010

Keywords ERPC · Uterine perforation · Fallopian tube incarceration · Fertility conservation

Introduction

A complex perforation of the uterine body with tubal incarceration has been reported in the literature in three cases; in each of these cases, the diagnosis was made on the basis of histological report. We describe a case of tubal incarceration following evacuation of the uterine cavity. In this case, a hysteroscopic diagnosis was made and the fallopian tube was conserved through laparoscopic surgery.

Case report

A 33-year-old Caucasian multiparous woman underwent a surgical termination of pregnancy at 6 weeks' gestation at a community-based medical facility. Histological examination confirmed trophoblastic tissue. Due to persistent spasmodic pelvic pain following the operation, a transvaginal ultrasound was performed, which suggested retained products of conception. However, a repeat surgical evacuation revealed minimal products; histological examination of the specimen demonstrated blood clot and no gestational tissue. Three weeks following her first procedure, she presented with unrelenting pain to our hospital. The pain was exacerbated by ambulation, but there were no other associated symptoms such as vaginal bleeding. Relevant past medical history included one Caesarean section and a termination of pregnancy. A repeat transabdominal ultrasound (TAUS) demonstrated 15-mm endometrial thickness, with a cystic structure within the endometrial cavity (Fig. 1). This was noted to be 19×27×13 mm in size, with internal septations. Both ovaries were normal, with no obvious adnexal masses or free fluid noted in the pouch of Douglas. The working diagnosis was thought to be persistently retained products of conception or Asherman's syndrome. On examination, she was haemodynamically stable and afebrile. Clinical assessment did not suggest acute bowel pathology. The urine pregnancy test was negative and urinalysis was unremarkable. Following an informed discussion, the patient was duly consented for a hysteroscopy and evacuation of the cavity. The initial view upon performing hysteroscopy suggested uterine perforation with small bowel incarceration within the endometrial cavity. Consequently, a diagnostic laparoscopy was performed, which demonstrated that the fimbrial end of the right fallopian tube had entered the uterine cavity through a posterior right lateral lower segment perforation. Normal tubal anatomy was restored by laparoscopy under hysteroscopic guidance. No active bleeding was seen at the site of uterine perforation on completion of the procedure.

R. Bharathan (✉) · S. Datta · S. Phakey
Department of Obstetrics and Gynaecology,
Royal Sussex County Hospital,
Eastern Road,
Brighton BN2 5BE, UK
e-mail: r.bharathan@doctors.org.uk

N. Boutrous
Department of Obstetrics and Gynaecology,
Medway Maritime Hospital,
Windmill Road, Gillingham, Kent ME7 5NY, UK

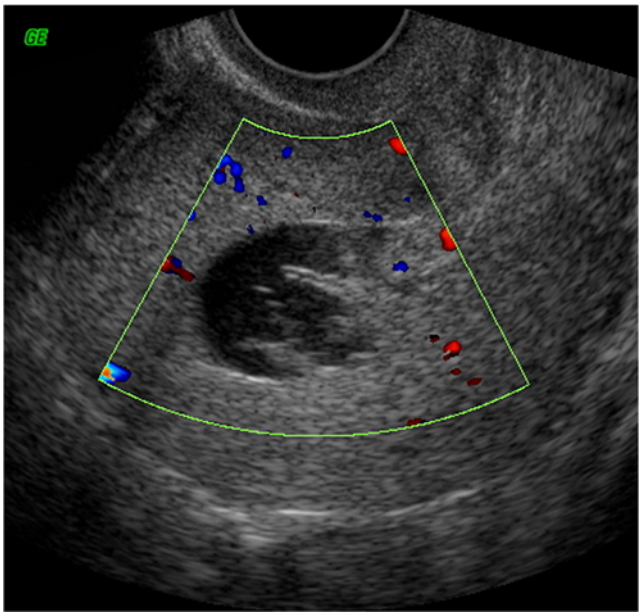

Fig. 1 Transverse view of uterine cavity demonstrating 'cyctic' lesion with septation

The woman was discharged from the hospital 2 days following her operation. Contraception was discussed and she was advised to contact the early pregnancy unit if she should become pregnant.

Discussion

In the United Kingdom, almost 200,000 pregnancies are terminated each year, with the majority of patients undergoing a surgical procedure [1]. Surgical termination of pregnancy is a safe procedure with an overall complication rate of 0.5% [2]. The incidence of uterine perforation varies between 0.8 and 6.4 per 1,000 cases [2]. Concomitant laparoscopic sterilisation has revealed that the true incidence of uterine perforation is likely to be much higher; in one study, laparoscopic examination revealed the perforation rate to be sevenfold higher [3]. Uterine perforation can be simple or complex due to associated injuries to other viscera or blood vessels. The complex visceral injury could be perforation or incarceration of bowel or omentum within the uterine cavity [4, 5]. There are four cases of fallopian tube incarcerations or intra-operative amputation had been reported [6–9]. In the first case, the patient presented with vaginal discharge, intermenstrual bleeding and dyspareunia of 10 months' duration after a puerperal dilatation and curettage [6]. Clinical diagnosis was that of an endometrial polyp prolapse; the polyp was surgically avulsed and the histology revealed this to be an incarcerated fallopian tube. In the second case, the right fallopian tube was inadvertently amputated by vacuum aspiration during therapeutic abortion [7]. In the third case, the patient presented with intermittent abdominal pain 5 years after first trimester vacuum aspiration termination [8]. Magnetic resonance imaging demonstrated class Va Müllerian duct anomaly (American Fertility Society classification) with a cystic lesion infiltrating the posterior uterine wall. Subsequently, she underwent hysteroscopy-guided laparoscopic right salpingectomy. In the most recent case, left fallopian tube incarceration complicated vacuum aspiration termination of pregnancy (VATP); clinical and ultrasonic suspicion led to laparoscopic conservation of the fallopian tube and repair of uterine perforation was achieved [9]. In this case, during repeat VATP prior to delayed definitive procedure, fragments of the tube were noted. It is of interest to note that, as in the index case, in three of the previously published cases the right fallopian tube was involved. Further, in three instances, tubal incarceration followed vacuum aspiration.

In patients presenting with pelvic symptoms following evacuation of uterine cavity, retained products of conception is the most likely diagnosis. Pertinent ultrasonic features of retained products of conception are thickened endometrium, echogenicity, a gestational sac-like structure or a space-occupying lesion within the uterine cavity [10]. The index patients' ultrasound demonstrated a cystic structure with septations within the cavity; in the presence of negative urine pregnancy test, alternative diagnoses should have been entertained. We suggest that when patients present with unremitting symptoms, particularly after repeat evacuation of the uterus or history of transcervical uterine surgery associated with atypical imaging findings, the clinician must have a high index of suspicion of complex uterine perforation.

Consideration should be given to endoscopic surgical management in such cases. In subsequent pregnancies, early ultrasound assessment is vital to locate the site of conceptus as these patients would be at increased risk of tubal pregnancy.

Conclusion

The incidence of uterine perforation during transcervical surgery is underestimated. It is vital to recognise complex perforations as the management of such cases needs to be proactive. Transcervical evacuation of the uterine cavity is the most common setting where such perforations may occur. If women report persistent symptoms along with unusual imaging findings following surgery, then clinicians must entertain the possibility of complex perforation, such

as tubal incarceration. This will permit optimal surgical management of women with conservation of fertility.

Conflicts of interest There are no conflicts of interest to declare.

References

1. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_099285.
2. Tristan S, Gilliam M (2009) First trimester surgical abortion. Clin Obstet Gynecol 52:151–159
3. Kaali SG, Szigetvari IA, Bartfai GS (1989) The frequency and management of uterine perforation during first trimester abortion. Am J Obstet Gynecol 161:406–408
4. Dunner PS, Thomas MA, Ferreras M, Jeorme M (1983) Intrauterine incarcerated bowel following uterine perforation during an abortion: a case report. Am J Obstet Gynecol 147:969–970
5. Shulman SG, Bell CL, Hampf FE (2006) Uterine perforation and small bowel incarceration: sonographic and surgical findings. Emerg Radiol 13:43–45
6. Steigrad SJ, Margin CJ (1978) Fallopian tube presenting as a uterine polyp. Aust NZ J Obstet Gynecol 18:281–283
7. Lapas KA, Todorok I (1987) Rare case of amputation of the right tube during therapeutic abortion by the vacuum aspiration method. Akus Ginekol 26:75–76
8. Deffieux X, Kane A, Faivre E, Gervaise A, Frydman R, Fernandez H (2008) Intrauterine fallopian tube incarceration: an uncommon complication of termination of pregnancy by vacuum aspiration. Fertil Steril 90:938–939
9. Trio C, Recalcati D, Sina F, Frucio R (2010) Intrauterine fallopian tube incarceration after vacuum aspiration for pregnancy termination. Int J Gynaecol Obstet 108:157–158
10. Kurtz AB, Shlansky-Goldberg RD, Choi HY, Needleman L, Wapner RJ, Goldberg BB (1991) Detection of retained products of conception following spontaneous abortion in the first trimester. J Ultrasound Med 7:387–395