Journal of Clinical and Nursing Research

Research Article

A Rare Case of Intrauterine Adhesion Caused by Intrauterine Fallopian Tube Incarceration

Yiran Liu, Yugang Chi*

1Chongqing Health Center for Women and Children, No.120 LongShan Road, Yu bei District, Chongqing 401147, China

Abstract: Hysteroscopy is widely used for the detection and treatment of intrauterine adhesion. Such technique, however, sometimes has limitations and even second damages. We report a rare case of severe intrauterine adhesion caused by uterine perforation with a fallopian tube incarceration. A 24-year-old woman underwent severe intrauterine adhesion and secondary infertility caused by fallopian tube incaceration into the uterine cavity after postpartum curettage. First hysteroscopy created a false passage through the previous uterine perforation, entered into the cavity of incarcerated fallopian tube, and led to iatrogenic hydrosalpinx. Secondary hysteroscopy combined with laparoscopy revealed a connection between the right tubal lumen and the uterine cavity by the false passage, released the adhesion, and reconstructed the uterine cavity. Early recognition of uterine perforation or tissue incarcerarion is significant in preventing further damage.

Keywords: Curettage; Fallopian tube; Hysteroscopy; Laparoscopy; Uterine perforation

Publication date: January, 2021
Publication online: 31 January, 2021
****Corresponding author:*** Yugang Chi, chiyugang@163.com

1 Introduction

Intrauterine adhesion (IUA) is mainly reported as a complication after intrauterine surgery, such as dilatation and curettage. IUA often result in menstrual and fertility disorders. Hysteroscopy the most reliable technique for IUA detection and treatment, caused by the direct vision of the uterine cavity which enables to accurately identify the presence, localization and extent of IUA[1]. Uterine perforation is rarely reported as a cause of IUA, but also a common complication of first-trimester suction curettage or postpartum evacuation of retained placental tissues, most without symptom and goes undetected[2]. Sometimes, it may contain incarcerated small bowel or omentum. But in rare cases, there are several reports of fallopian tube incarceration[3-5] or ovary incarceration[6], which are easily misdiagnosed like synechia, endometrial polyp, or incomplete abortion[7]. We report an unusual case of IUA with a false passage inadvertently got through during hysteroscopy which communicated with the intrauterine incarcerated oviduct cavity and leaded to iatrogenic hydrosalpinx.

2 Case report

In 2016, the patient was 24, gravida 2 para 1, underwent postpartum curettage 4 weeks after delivery for removal of retained placental membranes. Then, she kept lactation for 8 months. After stopping breastfeeding in half a year later, her menstrual cycle had not yet recommenced. She took progestogen therapy. Her menstruation recovered gradually, but the menstrual flow was very minimal, only a tenth of the former volume. In addition, the patient complained frequently of the watery leucorrhea between periods and the inefficiency of anti-inflammatory treatment. In December 2019, she was offered diagnostic hysteroscopy in local hospital, which confirmed severe IUA, polyp-like tissues in cervical canal and closure of the upper half of uterine cavity by scar conglutination. Subsequently, she was given the periodic treatment of oestradiol valerate and progestin for 4 months to promote endometria growth. Even so, her menstrual volume was still very few. She was

then referred to our hospital for further management. Except of IUA, ultrasound examination also showed hydrosalpinx (Figure 1.), which was never indicated before hysteroscopy. Due to her fertility requirement, she was recommended hysteroscopy combined with laparoscopy. During our hysteroscopy, there were still filled with cloudy adhesions in a narrow 10cm-deep uterine cavity (Figure 2.(a)), and some polyp-like tissues in cervical canal. Furthermore, it also showed the absence of myometrium and endometrium in the fundus of uterine cavity. Through the thin serosa membrane, the bowel movements were visible dimly. Immediately, the surgeon stopped the hysteroscopy and transfered to the laparoscopy. At laparoscopy, the right fallopian tube was partly incarcerated in the uterine fundus, with severe hydrosalpinx (Figure 2.(b)). Therefore, the surgeon suspected the presences of a dated perforated area on the uterine fundus and an intrauterine fallopian tube incarceration, and that the view of hysteroscopy wasn't uterine cavity, but incarcerated oviduct cavity. In this way, it could rationally explain the reason of patient's watery leucorrhea and hydrosalpinx. After neosalpingostomy and hysterorrhaphy, the uterine cavity was successfully entered during the repeat hysteroscopy, but it only showed the left tubal ostia. After the adhesiolysis of the right uterine cavity, her uterine structure was enabled to be reconstructed completely. Meanwhile, the polyp-like tissues in cervical canal were taken to biopsy. With an uncomplicated postoperative course, she was discharged from the hospital 6 days later. Eventually, the pathological evidences proved that there were no polyps, but smooth muscle tissues and a few oviduct mucosa tissues, with chronic inflammation(Figure 3). It confirmed the surgeon's suspicions. After 3 months, the patient's second-look hysteroscopy was normal and her period recovered.

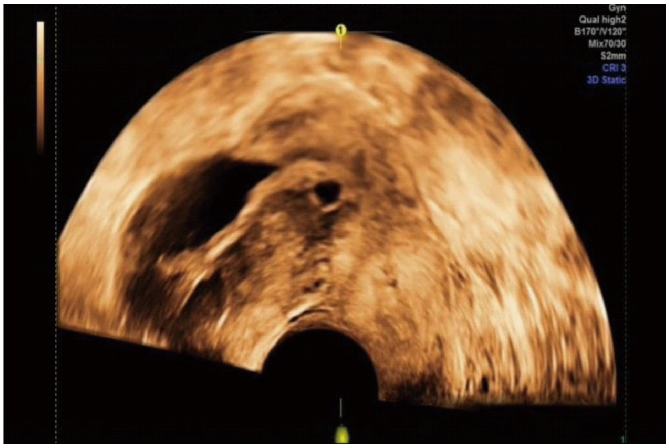

Figure 1. Transvaginal ultrasound image showing right hydrosalpinx begun at the uterine corner and a small no echo zone in intrauterine cavity.

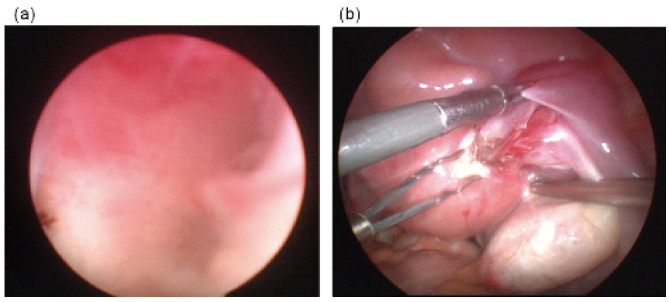

Figure 2. Hysteroscopy and laparoscopy. (a) Hysteroscopy showing a direct-view of fallopian tube cavity through the false passage. (b) Laparoscopic view showing the right fallopian tube incarceration.

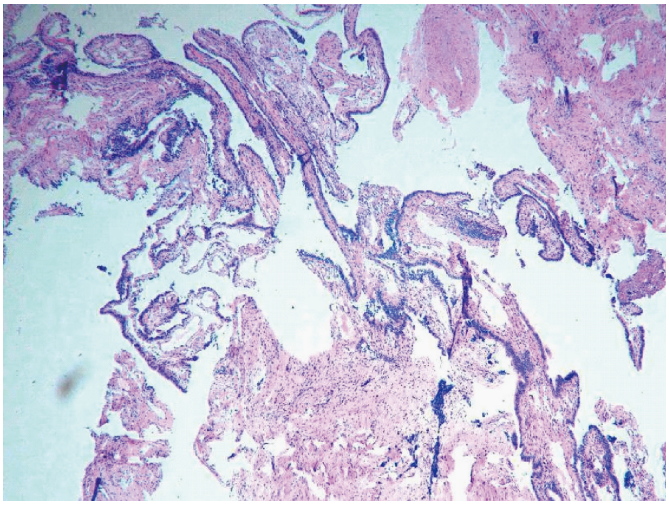

Figure 3. Microscopic examination in hematoxylin-eosin staining showing oviduct mucosa tissues, with chronic inflammation. Original magnification×40.

3 Discussion

This is a unique case of IUA on account of

intrauterine fallopian tube incarceration. Although there were several similar reports[3, 4, 7], there had been no report of a direct-view of tubal lumen through the passage of uterine perforation during hysteroscopy. Another unique aspect of this case is that an iatrogenic hydrosalpinx was formed because of the false passage between uterus cavity and fallopian tube cavity, and presented by ultrasound after diagnostic hysteroscopy. Therefore, the process of its diagnosis became more difficult and circuitous. During the process, there are three suspicious points worth considering and exploring. First, the hysteroscopy findings of IUA were not consistent with the patient's symptoms. In severe cases of IUA, the cavity is more or less completely obliterated resulting in amenorrhoea and reproductive failure[8]. At present, hysteroscopy is the recommended standard diagnostic method and treatment for IUA[9]. In our case, the view of first hysteroscopy was shown the close of uterine cavity without endometria, which meant severe adhesion and potentially leaded to amenorrhoea. However in reality, the patient just complained of hypomenorrhea inconsistent with findings of hysteroscopy. Second, the patient also complained of frequent copious watery vaginal discharge with no response to anti-inflammatory treatment. In general, watery leucorrhea is one clinical presentation of inflammation and tumors of the reproductive system such as vaginitis, cervicitis, fallopian tuber carcinoma, endometrial cancer and etc. Her symptoms signs and test results didn't support tumor, but her repeated anti-inflammatory treatments were ineffective. Third, disorders of the fallopian tubes, mainly obstruction and peritubal adhesion, such as hydrosalpinx, are the most common causes of female infertility, accounting for 30%–40% of cases[10]. However, the patient was not infertile, and her ultrasound exams had never shown hydrosalpinx before hysteroscopy. Furthermore, hydrosalpinx is usually found at the end of the fallopian tube, but in our case, it was begun at the right uterine corner. Therefore, we suspected that the truth was iatrogenic hydrosalpinx caused by a false passage created during hysteroscopy, which was confirmed by subsequent laparoscopy. Additionally, laparoscopy and hysteroscopy revealed an intrauterine fallopian tube incarceration. From this, we inferred that an uterine perforation probably had happened during her postpartum curettage and her right fallopian tube had been exactly brought into the uterine cavity along the perforation. Postoperative histopathological observation of the polyp-like tissues indicated tubal mucosa with chronic inflammation and confirmed our hypothesis. Unfortunately, her uterine perforation hadn't been undetected immediately during the procedure. After that, the intrauterine oviduct as a foreign matter, repeatedly stimulated endometrium, produced inflammatory mediums, and resulted watery leucorrhea and intrauterine adhesion. Nevertheless, the patient's amenorrhea during lactation covered up the adhesion and aggravated its degree. On account of severe adhesion, the false passage was created unconsciously during the first hysteroscopy, which caused iatrogenic hydrosalpinx. Also because of this, the patient underwent laparoscopy and hysteroscopy surgery, and the true reason of IUA was found.

In summary, we have reported a rare case of IUA that caused by uterine perforation. IUA caused by postpartum curettage may be combined with uterine perforation, oviduct incarceration and etc. After delivery, breastfeeding and amenorrhea may mask the real condition of IUA and aggravate the adhesion degree. During the diagnosis and treatment of severe IUA by hysteroscopy, there may be a false passages or even an uterine re-perforations. So, the early recognition of a false passage or an uterine perforation is significant in preventing further damage to the uterus.

Acknowledgement

The authors express their appreciation to the patient who accepted the publication of her medical history.

References

[1] Hooker AB, Lemmers M, Thurkow AL, et al. Systematic review and meta-analysis of intrauterine adhesions after miscarriage: prevalence, risk factors and long-term reproductive outcome. Hum Reprod Update. 2014; 20(2): 262-78.

[2] Nassar AH, Charara I, Nawfal AK, Ghulmiyyah L, Usta IM. Ectopic pregnancy in a uterine perforation site. Am J Obstet Gynecol. 2009; 201(1): e15-6.

[3] Deffieux X, Kane A, Faivre E, Gervaise A, Frydman R, Fernandez H. Intrauterine fallopian tube incarceration: an uncommon complication of termination of pregnancy by vacuum aspiration. Fertil Steril. 2008; 90(5): 1938-9.

[4] Trio C, Recalcati D, Sina F, Fruscio R. Intrauterine fallopian

tube incarceration after vacuum aspiration for pregnancy termination. Int J Gynaecol Obstet. 2010; 108(2): 157-8.

[5] Alanbay I, Dede M, Karasahin E, Ustun Y, Yenen MC, Baser I. Herniation of fallopian tube through perforated uterine wall during previous first trimester surgical abortion in an infertile patient. J Obstet Gynaecol Res. 2009; 35(5): 997-9.

[6] Su S, Tao G, Dong B, Shi L, Dong J. Delayed presentation of uterine perforation with ovary migration after dilatation and curettage. Int J Clin Exp Med. 2015; 8(4): 6311-4.

[7] Ceccaldi PF, Nguyen T, Mandelbrot L. Unusual synechia at hysterosalpingography: intrauterine fallopian tube after surgical abortion. Fertil Steril. 2011; 95(6): 2078-9.

[8] Song D, Xia E, Xiao Y, Li TC, Huang X, Liu Y. Management of false passage created during hysteroscopic adhesiolysis for Asherman's syndrome. J Obstet Gynaecol. 2016; 36(1): 87-92.

[9] Liu AZ, Zhao HG, Gao Y, Liu M, Guo BZ. Effectiveness of estrogen treatment before transcervical resection of adhesions on moderate and severe uterine adhesion patients. Gynecol Endocrinol. 2016; 32(9): 737-740.

[10] Montoliu-Fornas G, Marti-Bonmati L. Magnetic resonance imaging structured reporting in infertility. Fertil Steril. 2016; 105(6): 1421-1431.