IATROGENIC ENDOMETRIOSIS OF THE VAGINAL VAULT FOLLOWING A TOTAL LAPAROSCOPIC HYSTERECTOMY

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Background: Iatrogenic pelvic endometriosis is a rare complication of laparoscopic surgery. Pelvic seeding of endometrial tissue following uterine morcellation has been previously reported. This case describes endometriosis of the vaginal vault secondary to morcellation of the uterus.

Case Report: A 45-year old lady underwent a total laparoscopic hysterectomy for menorrhagia and a multiple fibroid uterus where no endometriosis was evident in the pelvis. The uterus was morcellated and removed via the vagina. Histopathology of the uterus did not show adenomyosis nor endometriosis. Eighteen months later, she presented with mild, regular cyclical bleeding. On examination, there was an abnormal epithelial nodule in the vaginal vault, which was subsequently excised. Histology revealed features consistent with endometriosis.

Discussion: The formation of an endometriotic nodule could have resulted from inadvertent seeding and implantation as a consequence of the uterine morcellator used during laparoscopic hysterectomy. Abdominal or vaginal vault spillage during uterine morcellation should always be minimized and vigorous irrigation of the pelvis is recommended.

INTRODUCTION

Endometriosis is a common gynaecological condition in which endometrial cells are deposited outside the uterine cavity. The pathogenesis of endometriosis is still an enigma. The endometrial cells are sensitive to hormonal changes and thus symptoms can be exacerbated during the menstrual cycle. It is typically seen in premenopausal women and affects between 5-10% of this group.

Iatrogenic endometriosis has been described previously in case reports as a rare complication associated with laparoscopic hysterectomy and post-
abdominal surgery (scar endometriosis). This case report describes iatrogenic endometriosis of the vaginal vault, secondary to vaginal uterine morcellation following a total laparoscopic hysterectomy that resulted in cyclical vaginal bleeding of six-month duration.

CASE REPORT

A 45-year old patient first presented with uncontrolled menorrhagia due to a multifibroid uterus (equivalent size to a 14-week gestation.) Various treatment options were discussed and the patient decided to opt for a hysterectomy (with conservation of the ovaries.)

Laparoscopic hysterectomy involved an umbilical port and two accessory ports. Examination under anaesthesia illustrated that both ovaries appeared to be normal with no evidence of endometriosis in the pelvis (around the uterosacral ligaments) nor in the vagina. Bi-polar diathermy was used to the vascular pedicles and the vagina was divided over the McCartney tube. The uterus was morcellated in order to be removed via the vagina. The vagina was then repaired laparoscopically with 0/Monocryl and the procedure was completed uneventfully.

Histopathology revealed a uterus weighing 420 grams. The fibroids were benign and the endometrium showed disintegration (the patient was menstruating on the day of surgery.) The pathologist confirmed the operation findings of no adenomyosis or endometriosis being present. The patient had an uneventful discharge on the third post-operative day. Eighteen months later, the patient was referred due to a six month history of regular cyclical bleeding. On examination, the vaginal vault showed an area of epithelium with features consistent with endometriosis.

An elective procedure ensued and the abnormal area was excised. The operation was otherwise uneventful. Histopathology demonstrated surface squamous epithelium with underlying stroma showing a tract lined by endometrium. The features were consistent with endometriosis. The patient made an uneventful recovery and two years later she remained well and asymptomatic.

Iatrogenic endometriosis has been described previously as a rare complication of laparoscopic supracervical hysterectomy and more frequently of abdominal scar tissue following pelvic surgery(1). This case describes iatrogenic endometriosis of the vaginal vault secondary to vaginal uterine morcellation following a total laparoscopic hysterectomy despite no previous history of endometriosis or adenomyosis.

DISCUSSION

Dr Sampson in 1924 first published a paper describing endometriosis; viable endometrial tissue outside the uterus. However the pathogenesis is still an enigma with many theories existing including retrograde menstrual flow
and abnormal immune responses including the role of cell adhesion molecules in the binding of endometrial cells to the peritoneal lining(2). The predilection of endometriosis to a site is also of question. The migration of endometrial cells appears to favour the pelvic area, yet extraperitoneal sites are also known. Iatrogenic endometriosis is becoming increasingly common with more laparoscopic procedures being performed. Evidence of the migration of tumour cells to laparoscopic ports is similar to the implantation of endometrial cells in iatrogenic endometriosis(3). Other operations, which are associated with iatrogenic endometriosis, include caesarean section and abdominal hysterectomy(4,5). It is most possible that morcellation of uterine tissue can result in the implantation and subsequent growth of viable endometrial cells within the vaginal vault. A similar report of implantation endometrioma at the site of the morcellator has previously been illustrated.(6)

The patient described had no prior history of endometriosis nor adenomyosis and therefore, the most probable cause of the vaginal vault endometriosis could be from small fragments left by uterine morcellation. The regular mild cervical bleeding post-hysterectomy was significant for endometriosis. As previously discussed in the published case report involving supracervical hysterectomy, the time delay between hysterectomy and symptoms of endometriosis could be due to small fragments of endometrial tissue left post-morcellation.(7)

Iatrogenic endometriosis may be suspected by a detailed history and physical examination and subsequently confirmed by fine needle aspiration cytology or histology following excisional biopsy.(8) Most commonly, it has the clinical presentation of a palpable subcutaneous mass near surgical scars that is often associated with cyclical pain and swelling during the menses. Depending on its location a variety of treatment options may be considered. Medical treatments include gonadotrophin releasing hormone agonists, progestogens or combined oral contraceptives. However, surgical excision of endometriosis has been shown to be curative, which was the definitive treatment for this patient.

More laparoscopic procedures are being performed, especially for hysterectomies. Surgeons should be certain that an undiagnosed uterine cancer is not present before attempting uterine morcellation. Iatrogenic endometriosis should be recognised as a consequence of uterine morcellation and surgeons, should recognize symptoms of this if the patient re-presents as part of their differential diagnosis. Nevertheless, laparoscopic hysterectomies are still favoured by surgeons where clinically indicated, as there is reduced hospital stay, post-operative complications and postoperative pain. (9,10)

Strict protocols should be implanted during uterine morcellation to ensure minimum spillage and virgorous irrigation of the abdomen and surrounding tissues to reduce the risk of implantation of viable endometrial cells, which can result in iatrogenic endometriosis.
REFERENCES