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OBSTETRIC COMPLICATIONS OF CERVICAL STENOSIS: CASE REPORT

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SUMMARY

A case of cervical stenosis is presented. We present a case of a patient who despite experiencing irregular scanty menses, was able to get pregnant.The enigma is that she did not experience any lochia loss post-partum.Cervical stenosis is a known predisposing factor to infertility, but it can also have other presentations as are described in this case report.

INTRODUCTION

Cervical stenosis is usually caused by contraction of scar tissue, agglutination of raw surfaces within the endocervical canal, or obliteration of the endocervical canal by tumor (for example, endometrial or cervical cancer). However, some cases may be congenital. Cervical stenosis mostoften occurs in the region of the internal os (1, 2).

Cervical surgery (cone biopsy and cautery of the cervix) and radium application are common causes of scarring. Also the hypoestrogenic state of menopause induces endocervical changes favorable for agglutination. Loop electrocautery excision procedure (LEEP) in women with low circulating estrogen levels such as secondary to periodic injections of medroxyprogesterone (Depo-Provera), postmenopausal women, and those who are breast-feeding may cause cervical stenosis (1, 2, 3).

The symptoms of cervical stenosis depend on whether the patient is pre-menopausal or post-menopausal and whether the obstruction is complete or partial. Common symptoms in pre-menopausal women include dysmenorrhea, pelvic pain, abnormal bleeding, amenorrhea, and infertility. The infertility is usually associated with endometriosis, which is most common found in reproductive-age women withcervical stenosis. Post-menopausal women are usually asymptomatic for a long time. Slowly they develop a hematometra (blood), hydrometra (clear fluid), or pyometra (exudate) (2, 4, 5, 6) As depicted above, the presentation is mainly gynaecological, but it can also be obstetric, as is seen in cases of failed induction of labour and cervical dystocia (7).

To diagnose cervical stenosis, if the obstruction is complete, a soft, slightly tender, enlarged uterus is appreciated as a midline mass, and ultrasound examination demonstrates fluid within the uterine cavity. This is further confirmed by the inability to introduce a 1- to 2-mm dilator into the uterine cavity (2).

This case is presented to highlight the little documented obstetric complications of cervical stenosis.

CASE REPORT

A 26 year old primigravida who was admitted at 40 weeks and 4 days for induction of labour due to being postterm. LMP 3/2/13, EDD 10/11/13. She had no complaints and perceived normal fetal movements. On examination, fundal height was term, fetus was in longitudinal lie, cephalic presentation and descent was 4 fifths. Bishops score was poor at 3 – cervix was long, firm, posterior and closed. Cervical ripening was done using prostin (prostaglandin E2). However after 24 hours and 3 prostin tablets inserted one 8 hourly, there was no change in the bishops score. A diagnosis of failed induction of labour in a primigravida postterm was made and emergency caesarean section carried out. Outcome of caesarean section was a live male infant 3870g who had an Apgar score of 9/1 and 10/5. Attempt at cervical dilatation was unsuccessful and cytotec (misoprostol) 600 mcg was inserted postoperatively.

Of note, patient did not experience any lochia loss postoperatively. Her vital signs were normal and uterus well contracted all through her stay in the hospital which was 4 days after delivery. Misoprostol 800 mcg was repeated on the first postoperative day and this was only able to produce a spot of blood. Ultrasound scan done on the day before discharge, only showed minimal fluid in the endometrial cavity (2.7cm) and the film is shown in figure 1 below.

Figure 1
Photo of the ultrasound done on the patient postoperatively

On the 4th day post operative day, patient was allowed home, seeing that she was stable, with normal vital signs and a well contracted uterus at 18 weeks. On follow up 1 year later, she was still amenorrhoeic and had implanon inserted.

DISCUSSION

Cervical stenosis is a challenging condition with multiple presentations. Our patient before conception used to experience scanty irregular menses. This impediment in menstrual flow is usually mainly due to outflow obstruction. In severe stenosis, hematometra can develop. A menstrual blood flow modeling system using a rigid tube suggested that a cervical os greater than 5 mm would allow almost all menstrual blood to flow out through the cervix; however, a diameter less than 2 mm would result in significant retrograde flow out of the fallopian tubes (8).

Another presentation is delayed conception or inability to conceive. However, our patient was able to conceive spontaneously. In patients presenting with infertility, cervical dilatation may be required. In a study published by Lin Y. N. *et al*, it was found thathysteroscopic cervical resection was a safe and effective treatment for cervical stenosis, and consequently infertility. In the 29 out of 30 patients in whom hysterosopic cervical resection was successful, repeat trial ET/IUI (Embryo Transfer/ Intra-Uterine Insemination) was successful in all of them. There were 5 twin pregnancies and 9 singleton pregnancies after IUI or ET. From the 5 women with twin pregnancies; 2 underwent premature delivery at 34 weeks; and 3 underwent elective cesarean delivery at 35, 36, and 37 weeks, respectively. From the 9 women with singleton pregnancies, 1 underwent cesarean section at 36 weeks because of preeclampsia, and the other 8 delivered at term. They all achieved successful births (9).

Other dilationmethods of a stenotic cervix include dilation with dilators under ultrasound guidance. Care is taken because aggressive dilatation of a stenotic cervix can lead to creation of false passages and uterine and cervical perforation. If stenosis recurs, monthly laminaria tents may be used (10, 11). Office follow-up and sounding of the cervix of women who have had a cone biopsy or cautery of the cervix is important to establish patency of the endocervical canal. Also after cervical dilation, it is useful to leave a T tube or latex nasopharyngeal airway as a stent in the cervical canal for a few days to maintain patency. CO_2 laser can also be used inthe treatment ofcervical stenosis. Two small series from Birmingham, England, and New York, reported the use of the CO_2 laser for treatment ofcervical stenosis. In these series approximately 70% of patients were relieved of theircervical stenosis (1, 2). Interestingly, cervical stenosis may also be relieved by injecting botulinum toxin (12).

However successful dilatation doesn't always happen. Sullivan-Pyke et al published a case report on a patient presenting with infertility in which he had to do transmyometrial embryo transfer due to severe cervical stenosis in which multiple attempts at cervical dilatation had failed. The patient was able to achieve a singleton pregnancy that progressed to term, 41 weeks, but had to be delivered by Caesarean Section because of arrest of cervical dilatation. This is much like in our patient where she was post term, induction of labour failed and delivery had to be by caesarean section (13).

Cervical dystocia during labour is a common presentation (1). Our patient did not experience any dilation of the cervix. In the United States of America, a study conducted by Saju J. found that of all cephalic deliveries, 8-11% were complicated by an abnormal first stage of labor. Dystocia occured in 12% of deliveries in women without a history of prior cesarean delivery. Saju also found thatdystocia accounted for as many as 60% of cesarean deliveries (14).

Cervical stenosis has huge gynaecological implications, but as has been highlighted in this study, it also has major obstetric implications. Lack of postpartum lochia loss has not been documented and this publication's purpose has been to highlight on its possibility.

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