

Pinhole hymen- A case report

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Abstract:

Background: Female genital tract anomalies have an important impact on a person's sexual activity and fertility. Microperforate (pinhole) hymen is one among them. Microperforate hymen can lead to primary amenorrhea, acute or chronic pelvic pain, abnormal vaginal bleeding, infertility, urinary tract infections and foul-smelling vaginal discharge. The tiny opening can be a passage for menstrual bleeding and sperms. Hence these women may have delayed diagnosis. **Case Report:** A 22yr old, married for 2 years presented to the clinic with anxiousness to conceive. History of difficulty in coitus and dyspareunia. History regular menstrual cycles with decreased menstrual flow. On local examination, a membranous covering over the vagina was present, with no visualisation of cervix and through an orifice of 0.1mm in the taught membrane, bleeding was present. On further evaluation, MRI abdomen and pelvis revealed a cyst of size 3.1x3.6x4.8 cm in the posterolateral wall of vagina at the level of pubic symphysis. She was managed surgically with excision of hymen and cyst marsupialisation. Post-operative period was uneventful. She conceived spontaneously in 3 months after surgery and delivered a term healthy baby. [5] **Results:** Failure to identify and manage these patients correctly may have long-term sequelae for their psychological, sexual and reproductive health.

Keywords: Imperforate hymen, Infertility

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I. Introduction

The hymen is an area of tissue that represents the opening to the vagina. It is a ring-shaped tissue with a hole in the centre. It is present at birth. There are many congenital abnormalities of the hymen^{[2][3]} with the most common abnormalities being i) Imperforate hymen ii) Microperforate hymen and iii) Septate hymen. The symptoms of primary amenorrhea, abnormal uterine bleeding, dyspareunia and infertility are usually common in hymeneal abnormalities. Our case report is about a woman who presented late with complaints of infertility and how the diagnosis of microperforate hymen was made and managed. A microperforate hymen is basically an imperforate hymen with a very small pinhole opening on it. The hole may allow passage of mucus and/or blood to come through the opening, but the woman is bound to have long menstrual cycles exceeding 7 days as the blood cannot come out at a normal rate. A microperforate hymen may resolve spontaneously with age while in others a surgical approach can be undertaken to resect the excess hymeneal tissue.

II. Case report

22 years old female presented to the fertility clinic of Sri Ramachandra Hospital with the following

Chief complaints: Anxiousness to conceive for the past 2 years.

History: She had complaints of decreased menstrual flow during menstruation but also prolonged cycles for up to 10 days. She also had complaints of coital difficulty and dyspareunia. There were no urinary disturbances. As she had presented to the fertility clinic for the first time and never been clinically examined, we proceeded with examination.

Clinical Examination: Bleeding present through a tiny orifice of 0.1mm, which was 1cm above the fourchette.



Figure 1: Imperforate hymen

Radiological Evaluation: As it is common to have associated anomalies, it is important to have a radiological evaluation. MRI Pelvis showed a cyst of size 3.1cm x 3.6cm x 4.8cm in the postero-lateral wall of vagina at the level of pubic symphysis, possible Bartholin cyst. It appears homogeneously hyper intense on T2 weighted imaging. It showed peripheral wall enhancement on contrast administration. No soft tissue or haemorrhage seen within. The cyst extends below the pubis symphysis and seen posterior to urethra. Uterus is anteverted measuring 6.9 x 3.5 cm, ET measures 6mm, junctional zone is normal. Myometrium and serosa show normal signal intensity and intact.

Surgical Management: Under anaesthesia, an 18G venflon was guided through the microperforate hymen (Figure 2). Hymenectomy was proceeded with a transverse incision over the membrane, incision was extended posteriorly till the fourchette as an inverted T shape. The edges were sutured to the introitus. Cervix was identified, it was normal. The anterior vaginal wall cyst was identified. The fluid within cyst was aspirated and cyst wall marsupialised. At the end of procedure, passage of 2 fingers was possible through the introitus. (Figure 3). Post-operative period was uneventful.

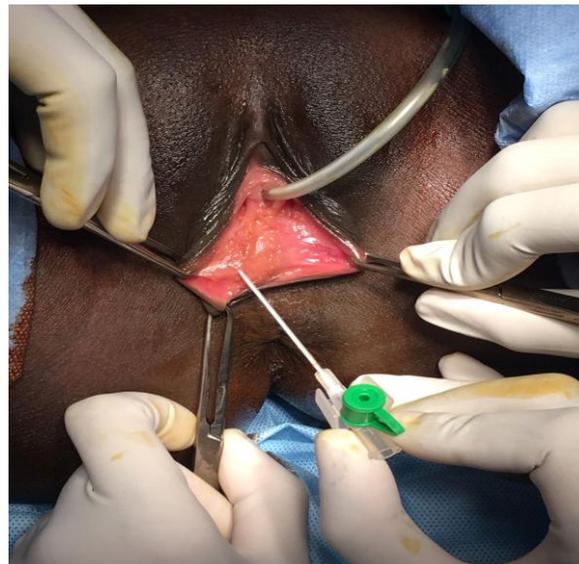


Figure 2: Passage of 18G venflon



Figure 3: Able to pass 2 fingers through introitus

III. Result

She conceived spontaneously after 3 months and had an uneventful antenatal period following which she delivered a term baby by elective caesarean section due to breech presentation.

IV. Discussion

Hymen is an embryological remnant that usually perforates during the later stages of embryonic development and remains as a thin fold of mucous membrane. Hymenal anomalies occur if the genital tubercle fails to breakdown^[1]. In microperforate hymen the presentation is usually at puberty with abnormal menstrual bleeding or later with difficulty in intercourse/ infertility.

Clinical examination is the most important step in diagnosis. Abdominal examination might have a palpable mass in cases where the menstrual blood is evacuated completely following a cycle leading to hematocolpos or pyocolpos^[7]. The perineum is best examined in dorsal lithotomy or frog-legged position. The aim is to differentiate a hymeneal anomaly from other anatomic causes of obstruction like labial adhesions, transverse vaginal septum, or distal vaginal atresia. Radiological evaluation with Ultrasound/MRI completes the evaluation.

Surgery is the final solution for this condition though there are reports that virginity sparing surgery^{[8][9]} where the orifice is minimally increased in size or cribriform punctures are made as a temporary solution for the menstrual outflow in unmarried girls as it is a social problem in a lot of religions to have the hymen ruptured before marriage. Surgical management should include preoperative and postoperative counselling for the patient and her family. The surgical technique used depends on the type of variation. The results of the surgery are similar in all techniques though different centers will have its own preference of technique to follow^[11]. It is important to have urethral catheter placed preoperatively to confirm the location of the urethra and mainly avoid any injury to the urethra. The most commonly used incision on the hymen would be cruciate or U-shaped incision^[4]. The remaining hymenal tissue should be excised and the edges should be reapproximated using an absorbable suture in an interrupted fashion for haemostasis and to prevent reclosure of the hymen^[14]. A drain might be placed for cases with hematometrocolpos.

Postoperative care would be personal hygiene with some topical emollient/ topical oestrogen for healing and decreasing the chances of stricture/stenosis^[13]. Antibiotic can be given to patients with hematometrocolpos. Tampon use and sexual activity should be avoided until proper vaginal distention and till the initial bleeding and discharge have resolved. No additional care is required after surgery. Although for a few who have stenosis and adhesions after hymenectomy, dilator therapy may be considered.

During the follow-up period, patients tend to have irregular menstrual cycles with dysmenorrhea mostly associated with endometriosis^[15] as a result of the initial hematometrocolpos. Sexual dysfunction and infertility are majorly resolved in all patients.

Although there have been case reports of spontaneous conception^{[6][10]} in patients who have had sexual contact in the absence of vaginal penetration, it is agreed that surgery reduces the psychological and sexual stress involved for the patient^[12].

V. Conclusion

Any adolescent or women who presents with abdominal and pelvic pain, amenorrhea or inability to have penetrative vaginal intercourse should be suspected to have an atypical hymenal anatomy. Clinical evaluation is primary along with radiological evaluation to find out the type of anomaly. Surgical management of clinically significant hymenal variations is necessary to prevent any long-term sequelae.

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