PJMS- Volume 4 Number 1: Jan - June 2014

Case Report

A case report of partial vaginal atresia

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Abstract :

We report a case of partial vaginal atresia who was inadvertently subjected to hymenotomy by a private practitioner. A cruciate incision was made below the urethral opening but failed to drain hematometrocolpos. Her ultrasonography (USG) and computed tomography (CT) scan report showing persistent pelvic mass. We are presenting this case to apprise clinicians about this entity that every cryptomenorrhoea is not an imperforate hymen only. Diagnosis should be made accurately before attempting surgery.

Keywords : Hematometrocolpos, Vaginal atresia, Cryptomenorrhoea.

Introduction:

Failure of degeneration of the epithelial plate in the mullerian tubercle results in imperforate hymen and persistence of a portion of the solid cord of cells in the fused mullerian ducts above the level of hymen results in atresia of the vagina. During infancy this leads to hydrocolpos, hydrometrocolpos, hydrosalpinx and its pressure effects. If the obstruction remains unnoticed during childhood, at menarche menstrual blood collects above the obstruction. This leads to hematocolpos, hematometrocolpos, hematosalpinx and its pressure effects. Menstrual blood fails to come out through the genital tract due to obstruction in the passage. This is known as cryptomenorrhoea (1).

Case History:

A 12-year-old girl presented with the complaint of cyclical lower abdominal pain since 6 months. There was history of hymenotomy done 21 days back by private practitioner with the diagnosis of imperforate hymen. There was persistent pelvic mass on ultrasonography and CT scan report. Menarche was not attained.

Her general and systemic examination was normal. Per abdomen examination showed suprapubic lump. On palpation it felt to be arising from pelvis. The lump was approximately 5 cm x 3 cm in size. There was mild tenderness.

As patient was uncooperative, we did local examination under general anesthesia. On examination, external genitalia were well developed. Urethral opening was normal. No vaginal opening was seen but healed granulation tissues were present of previous surgery (Fig. 1). Anal orifice was normal. On per rectal examination, a 5 cm x 6 cm firm mass was palpable anterior to rectum more on the left side. It was 2 to 3 cm away from the introitus. Uterus was felt on the right side in continuation with the mass.Her hemoglobin (Hb) was 10.2 gm%. Urine examination, blood urea, blood sugar, serum creatinine, serum sodium (Na) and serum potassium (K) reports were normal. On ultrasonography, abdomen was normal, pelvis showed a well defined anechoic collection in the uterus, cervical canal and vagina. The collection was approximately 245 cc. The lesion showed posterior acoustic enhancement and few echogenic contents within. It was diagnosed as hydrometrocolpos / hematometrocolpos. CT scan abdomen and pelvis showed a well-defined hypodense collection with hyperdense rim in the anticipated region of uterus. It was seen protruding superiorly beyond the confines of urinary bladder. Normal corticomedullary differentiation was seen in both kidneys.

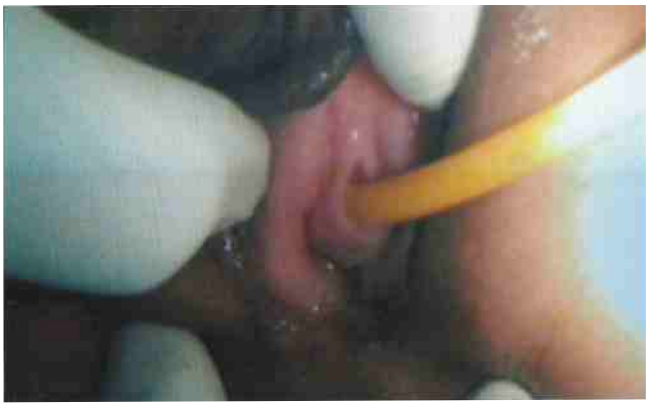

Figure 1: Vaginal atresia before surgery

She was from poor socioeconomic status and her parents refused further investigations. Diagnosis of hematometrocolpos with vaginal atresia type 3a was made. Abdominovaginal pull through surgery was planned. Preoperative bowel preparation with peglac was done in view of the possibility of sigmoid conduit. Broad spectrum antibiotic coverage was given. Abdomen was opened by suprapubic transverse incision. Intraoperative findings were large hematocolpos seen occupying the whole pelvis obliterating the pouch of Douglas. Uterus was bulky sitting on the top of hematocolpos. Bilateral tubes and ovaries were normal.

Loose fold of bladder peritoneum identified and opened. Bladder was pushed down. A small transverse incision was made in lower anterior uterine wall. Thick dark altered blood came out through uterine opening. About 250 ml of altered blood drained using suction cannula. We could pass a metal dilator through uterine opening, cervical canal and vagina. Metal dilator's tip could be easily palpated through introitus between urethral and anal opening. A Foley's catheter was

passed through urethra. A metal dilator was passed through anal opening. A cruciate incision was made at the tip of vaginal metal dilator between urethra and anus.

Vaginostomy was done. Guided with Foley's catheter and per rectal metal dilator enabled dissection without injury to urinary tract and rectum. Altered blood aspirated. Abdominoperineal vaginal pull through surgery was done (Fig. 2).

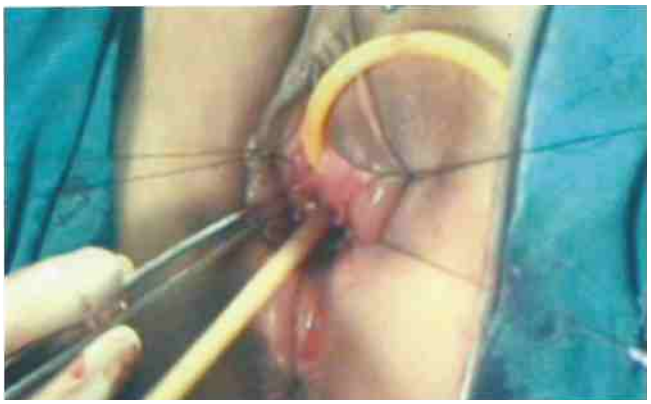

Figure 2: Vaginal pull through surgery

Foley's catheter no. 16 was passed through neovagina and inflated with 10 ml normal saline. Postoperative recovery was good. Daily perineal wash was given. Examination under anesthesia was done on 15th postoperative day. Wound healing was good. We could pass Hegar's dilator no. 4 easily by the side of vaginal catheter. Vaginal catheter was kept for 6 weeks. Later on she was asked to pass vaginal dilator daily to keep neovagina patent.

Discussion:

Failure of degeneration of the epithelial plate in the mullerian tubercle result in imperforate hymen and persistence of a portion of the solid cord of cells in the fused mullerian ducts above the level of hymen results in atresia of the vagina. In infancy, when there is a high level of maternal estrogen, fluid secreted from endocervical gland and mullerian glandular epithelium in the upper vagina collected above the obstruction. This leads to hydrocolpos, hydrometrocolpos, hydrosalpinx and its pressure effect. If there is low level of maternal hormones in the presence of vaginal obstruction, the obstruction remains unnoticed until puberty. In early puberty, when the patient herself begins to elaborate estrogenic hormones at menarche, menstrual blood collects above the obstruction. The menstrual blood fails to come out from the genital tract due to obstruction in the passage. This is known as cryptomenorrhoea. This leads to hematocolpos, hematometrocolpos, hematosalpinx and its pressure effect (1). The condition is now being increasingly diagnosed prenatally using ultrasonography, which shows a large retrovesical hypoechogenic mass in the fetal abdomen. However, when sonographic findings are inconclusive, magnetic resonance imaging is a useful complementary tool for assessing fetal urogenital anomaly (2).

The distal vaginal outflow obstruction is usually because of an imperforate hymen (60-70%) that forms a translucent membrane bulging between the labia. In atresia of the vagina instead of bulging membrane, area may be retracted upward into the pelvis as a result of enlarging upper vagina escaping from the small pelvis into the more spacious abdominal cavity. Hematometrocolpos can be associated with inherited disorders like McKusick-Kaufman syndrome, Bardet-Biedl syndrome, and other genitourinary, gastrointestinal and cardiac anomalies (1).

Obstructive lesions leading to hematocolpos require prompt action to relieve pain, retrograde menstruation and pressure effect on adjacent viscera. Re-anastomosis with recurrent mass and pain is a frequent sequel following any vaginal reconstructive surgery which may make future attempts more difficult (3).

Every cryptomenorrhoea is not an imperforate hymen only. If hematocolpos with no hymenal bulge seen, accurate diagnosis should be made before attempting surgery. A comprehensive management is imperative to preserve the reproductive potential, as significant proportion of patients may experience later with sexual difficulties, menstrual irregularities, endometriosis and infertility (4).

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