Case Report

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Primary Amenorrhoea with Imperforate Hymen: A Case Report

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Abstract

Imperforate hymen is a rare condition, most commonly diagnosed among obstructive anomaly, with a incidence of less than 1%. It is an isolated anomaly that is seen due to failure of canalisation of urogenital sinus. It presents with primary amenorrhea, cyclical abdominal pains and may be with urine retention and it is observed at the age of puberty in girls. We present a case of 13 year old girl with imperforate hymen underwent hymenoplasty under general anesthesia for Hematocolpose and Hematometra, presented with abdominal pains on and off and tenesmus. On follow up the girl had started with normal menstruation.

Keywords: Hymenoplasty; Imperforate Hymen; Primary Amenorrhoea.

Case Report

Hymen is an incomplete mucous fold that closes the cavity of vagina near external orifice of the vagina. Hymen may present in various shapes like annular, crescentic or cribriform.[1] Imperforate hymen, is the most common female genital tract malformation.[2] It occurs rarely and has a prevalence rate of 0.014–0.1%.[3,4] Mostly pubertal girls present this anomaly.[5]

A 13 year old girl came for consultation to Gynaecologist with complaints of abdominal pain periodically since one year. She also complained of associated constipation and retention of urine. She was completely alright before one year. Since then she started getting crampy pain in lower abdominal region which were cyclic in nature. The pain was lasting for six to seven days of every month. The severity of pain went on increasing by each month and it became more severe since last two months and also the lower part of the abdomen was increasing in size. She also presented with the history of constipation and difficult micturition. She had no history of nausea, vomiting and fever. She did not give any positive history regarding onset of menstrual cycle but she had growth of pubic hairs and breast buds had also developed that were confirming the onset of puberty. The patient had no history of any vaginal discharge and any sexual activity. There was no history of similar complaints in any family members.

On physical examination, the signs of secondary sexual characteristics like pubic hair and mammary gland buds were well developed. On examination of cardiovascular system nothing abnormality was found. On per abdominal examination, lower abdomen was distended and there was tenderness on pressure. Perineal examination showed bulging bluish hymen and imperforate membrane was seen.

There were no other major abnormalities of external genitalia observed.

An Ultra Sonography of abdomen and pelvis was done which showed partially distended urinary

bladder with normal wall thickness. The size, shape and outline of uterus was normal. The size was 6 × 2.9 cm. Endometrium showed hypoechoic collection with internal echoes noted in it, Myometrium was normal. Cervical canal showed collection in it, e/o collection in cul de sac.

Vagina showed hypoechoic collection in it with internal echoes noted in it measuring about 9.9 × 5.5 cm. All findings from Ultrasonography were suggestive of Hematometrocolpos (Fig. 1). Both the ovaries were normal. Aorta and Inferior Vena Cava were normal. Both the adrenals were normal. There were no evidence of Ascitis or enlarged lymph nodes. Bowels appeared normal.

Fig. 1: Hypoechoic collection in cervical canal and uterus.

Treatment

Patient was given general anaethesia. Hymenoplasty was carried out. The patient was taken in theatre and an X-shaped incision of the hymen was made under anesthesia and approximately 1000 milliliters of thick chocolate coloured blood was drained. The edges of the hymen were turned outward and sutured by Vicryl 2/0 sutures. Local analgesic cream and prophylactic oral antibiotics were given to patient. She made uneventful recovery and was doing well at 1 month. She was however lost to follow-up after that.

Discussion

Lui et al.[6] revealed the average age of presentation is 12 years and range is 10-15 years. Liang et al.[7] stated mean age presentation of imperforate hymen as 13.2 years and range 11–16 years. The patient with imperforate hymen presents with following signs and symptoms;

I. Amenorrhea, may be primary due to accumulation of blood in the vaginal cavity obstructed by imperforate hymen[5] or secondary that may occur after spontaneous closure of previously perforate hymen. The later mainly occurs in micro perforate or stenosed hymen following surgical or sexual trauma where initial light periods will be experienced but continuous stenosis leads to complete obstruction and amenorrhoea.[8]

II. Periodic pains in lower abdominal region or pelvic region on and off (up to 60%)[3,5,9] due to continued distension of the vagina and uterus by accumulating menstrual blood and low back pain (38–40%)[5] which is a referred pain after irritation of the sacral plexus and nerve roots by the distended vagina and uterus.

III. Obstruction

   1. Obstruction of Urinary outflow and its complications (58%).[6] Acute retention of urine[8,6,12] is caused by pressure on the bladder by the distended uterus that causes angulation at the neck of bladder and stricture of the urethra.[10]
   2. Vaginal outflow obstruction which is seen as a bluish bulge at the introitus.[11]
   3. In chronic cases intestinal obstruction leading to constipation (20–27%)[6] and tenesmus[11] also seen.

IV. Mass per abdomen due to distended uterus and vagina with accumulated menstrual blood.[5]

V. Accumulation of blood in uterus leads to the development of endometriosis and it can be confirmed with the help of laparoscopy while performing hymenoplasty.

Vulvar distension differentiates imperforate hymen from transverse vaginal septum 1 Imperforate hymen can be usually diagnosed clinically which can be confirmed by ultrasonography. Hymenoplasty is the choice of treatment under general anesthesia. An X-shaped incision at 2-, 4-, 8-, and 10-o'clock positions is used due to which risk of risk of injury to urethra is reduced. Incision should be in quadrants of hymen and the mucosal margins are approximated with fine delayed-absorbable suture.[12] The outcome of surgical hymenotomy is good and the recurrences are rare.[7]

Teaching Point

We can suspect Imperforate Hymen in absence of menstrual cycle in pubertal girls presented with periodical abdominal pains. In such cases a complete gynaecological history, examination and investigations may prevent serious complications due to delay in diagnosis.

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