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Acute urinary retention in an adolescent girl secondary to hematocolpos: A case report

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Abstract

Imperforate hymen is a rare occurrence. It presents with cyclical pain abdomen in adolescent girls. It can also present with acute urinary retention. We present a case of acute urinary retention in a 14 year old girl secondary to imperforate hymen.

Keywords: Imperforate hymen, urinary retention, adolescent girls

Introduction

Acute urinary retention can occur in adolescents due to various causes. Conditions associated with retention of urine in adolescents are neurological processes in 17%, severe voiding dysfunction in 15%, urinary tract infection in 13%, constipation in 13%, adverse drug effect in 13%, local inflammatory causes in 7%, locally invading neoplasm in 6%, benign obstructing lesions in 6%, idiopathic in 6%, combined urinary tract infection and constipation in 2%, and incarcerated inguinal hernia in 2% of cases [1]. Imperforate hymen is rare, with an associated incidence of 1 in 2000 people [2]. It can also lead to urinary retention. We present a case of acute urinary retention in a 14 year old girl with imperforate hymen.

Case report

A 14yr old girl presented to the Department of Obstetrics and Gynecology, BLDE (Deemed to be University), Shri BM Patil Medical College, Hospital and Research Center, Vijayapura, Karnataka, with the history of urinary retention of one day. She had undergone multiple catheterisations prior to her visit to the hospital to relieve herself. She had no history of abdominal trauma. There was no h/o vomiting, jaundice, pedal oedema or hematuria. She had no history of cyclical abdominal pain. She had not attained menarche. On examination, her abdomen was moderately distended with mild suprapubic tenderness. On examining her external genitalia it was noted that she had an imperforate hymen appearing as bluish grey bulge posterior to the urethra. [Figure 1]. She was catheterized. Ultrasonography revealed hematocolpos of 12 x 7 x 10cm lying posterior to bladder, in the vaginal canal. [Figure 2] No other abnormal findings detected. Her lab tests were unremarkable. She underwent hymenotomy using cruciate incision with drainage of hematocolpos. The edges were trimmed. As the edges were bleeding, the edges were sutured with chromic catgut number 1. The edges were trimmed minimally so as to prevent defloration. Prophylactic antibiotics were administered. Her duration of hospital stay was uneventful with full recovery. She was discharged on the fifth postoperative day, and was to be seen in the gynaecological clinic for follow up.



Fig 1: Imperforate Hymen



Fig 2: Ultrasound showing collection in the vagina, foleys bulb and the uterus(arrow)

Discussion

Failure of the endoderm of the urogenital sinus to completely canalize results in imperforate hymen. The incidence of imperforate hymen is 0.01% to 0.05% [3].

A good evaluation at birth could pick up the imperforate hymen at the earliest, however most of the times imperforate hymen is not identified until puberty, with girls presenting at age 13 to 15 years. The symptoms due to the collection of menstrual fluid in the genital tract begin to appear but menstruation has apparently not started. Imperforate hymen can have a varied presentation. Abdominal mass may be due to pressure on the urethra leading to urinary retention and dysuria. Constipation, and dyschezia can be due to pressure of the collection on the rectum. Differential diagnosis of the imperforate hymen are other obstructing anatomical defects. Differential diagnosis of imperforate hymen from other obstructing anatomic etiologies, such as, urogenital sinus, transverse vaginal septum, labial adhesions or distal vaginal atresia should be ruled out. The correction of imperforate hymen is required in the symptomatic prepubertal patients. Early diagnosis of the imperforate hymen does not warrant early treatment, imperforate hymen may open spontaneously at puberty due to estrogenisation [4].

Surgical management of the imperforate hymen is done by incision of the hymen at 2, 4, 6, and 8 o'clock positions. The quadrants of the hymen are then cut, and the mucosal margins are approximated with fine delayed-absorbable suture material. If the hymenal tissue is cut too near the vaginal mucosa, it may result in scarring and stenosis. Which can further result in dyspareunia. All unnecessary intrauterine instrumentation should be avoided because if hematocolpos has already developed, there is the risk of perforating the thin, overstretched uterine wall [5].

Conclusion

Imperforate hymen is a diagnosis which should be kept in mind while treating acute urinary retention in adolescent girls. Virginity sparing surgical approach to cases of imperforate hymen is desirable.

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