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Case Report

Hematometrocolpos Secondary to Imperforate Hymen Presenting with Urinary Retention in an Adolescent Girl

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Abstract

Acute urinary retention is uncommon in females in general and children in particular. We report a 14-year-old adolescent girl presenting with acute urinary retention due to hematocolpometra secondary to imperforate hymen on a background of chronic constipation. This complicated the delay in diagnosis as there is reluctance of the adolescent girls to allow easy inspection of their external genitalia. Primary amenorrhea in association with cyclical lower abdominal pain and palpable central abdominal lump after relief of the urinary retention and constipation by an enema resulted in ultrasound scan examination which confirmed the diagnosis and perineal examination showed imperforate hymen as the cause. She underwent cruciate interdigiting hymenoplasty uneventfully with excellent cosmetic functional and anatomic results.

Introduction

The imperforate hymen is a rare gynecologic abnormality that can be easily missed on initial presentation if a detailed history and perineal examination has not been performed. We wish to report an unusual case of acute urinary retention in a 14-year-old girl with background of chronic constipation and had yet not started menstruating with brief review of literature.

Case Report

A 14-year-old girl with a background history of chronic constipation and ongoing periodic abdominal pain of 9months duration was referred to us with urinary retention of 12 hours duration and acute constipation of 5 days. She was otherwise healthy without any prior medical or surgical history.

She was a febrile and hemodynamic ally stable with pulse 84 per minute, temperature 37 C and her blood pressure was 128/76 mm Hg. Prior to referral, an option of urinary catheter and a phosphate enema was given. It was thought that urinary retention was secondary to constipation and an enema was given.

She responded to it and opened bowels with a very hard stool and once that type 1 Bristol chart stool was passed, she was able to empty her bladder spontaneously without the need for any catherization.

Her periodic lower abdominal pain got aggravated. She had not started menarche and her mother had her menarche at 14 years of age. However, on arrival, she still had palpable lower abdominal central suprapubic non-tender mass arising from pelvis. Perineal examination showed imperforate flat hymen (Figure 1A). Rectal examination showed empty rectum with a soft non-tender mass in the distended vagina.

An ultrasound scan confirmed Hematometrocolpos with 13X7 cms distended obstructed vagina filled with blood and a 4.5 mm imperforate hymen (Figure 1). She underwent examination under anaesthesia, aspiration of non-clotting blood and cruciate interdigiting hymenoplasty uneventfully. She had excellent anatomic, cosmetic and functional results at follow up.

Discussion

Imperforatevaginal hymen is the commonest obstructive disorder of the lower female reproductive system. The overall incidence is between 0.014% to 0.024% in children, and 1 in 2000 gynaecologic patients as a whole. It could be familial in some cases and if not detected early can lead to complications of endometriosis and vaginal ad enosis in rare cases.

This is an interesting clinical case of a rare combination of conditions which, however, similar cases have been described in the literature earlier [1-6]. The imperforate hymen leads to collection of menstrual blood proximal to it and caused pressure effect on the

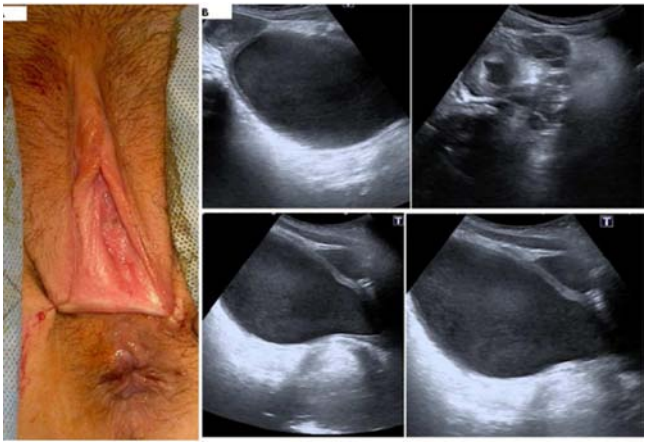

Figure 1: Clinical photograph-note flat imperforate hymen and multiple chronic fissures-in-ano. B USS images in longitudinal and transverse sections showing uterus at the top, bladder in front and blind obstructed dilated vagina.

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rectum aggravating the constipation and caused urinary retention by compression of the bladder neck and urethra leading to complete pelvic outlet obstruction and precipitating the emergency.

Imperforate hymen may be detected prenatally on delayed scans or it may present with hydro or pyo-metrocolpos in the neonatal period due to maternal hormonal effects. In the developing world neonatal screening physical examination is not routine and it may escape attention.

It could be an incidental finding during genital examination. It may be detected during evaluations for primary amenorrhea in adolescent girls. Common physical findings are a bulging blue-black membrane in the vulva, cyclic abdominal pain and/or a pelvic mass and primary amenorrhea with normal secondary sex characteristics. Our case had no bulging blue-black hymen and was flat and relatively thick.

Maternal age at menarche, cyclical central lower abdominal pain and high index of suspicion may allow early detection [1-6]. Perineal examination with ultrasound is diagnostic and inter-digiting hymenoplasty gives satisfactory cosmetic and functional results.

Maternal age of menarche is usually a good indicator to estimate adolescent girl's estimated menarche which should be one year less than her mother. Cyclical pelvic pain is a good reminder of imperforate hymen with Hematometrocolpos although background ongoing chronic constipation or backache may delay detection and urinary retention may precipitate emergency.

Pelvic ultrasound scan should be considered as part of extended clinical examination and Hematometrocolpos may be a part of a wider syndrome involving complex lesions.

Conclusion

In summary, although uncommon, acute urinary retention in an adolescent girl who has yet not started menstruation and having cyclical pelvic pain and palpable central lower abdominal mass even after relief of urinary retention should raise the possibility of imperforate hymen and perineal examination should be performed. Background of chronic constipation compound delay in the diagnosis. Ultrasound scan is very helpful in establishing the diagnosis and the thickness of the hymen. Cruciate interdigiting hymenoplasty is curative with excellent prognosis.

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