Case Report

Urethral prolapse: An important differential diagnosis of bleeding from the vulva in pre-pubertal African girls

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Abstract

Urethral prolapse is the abnormal protrusion of the urethral mucosa through the external urethral meatus. It is a rarely diagnosed condition as most cases will be misdiagnosed as sexual abuse. If diagnosed, however, medical treatment with follow-up will usually suffice. If this fails, or in the presence of complications, surgical management may be employed. The most common presenting feature is urogenital bleeding. Genital bleeding in a pre-pubertal child is alarming to parents. Their first impression is that of a sexual abuse resulting in the suspicion of all adult males in the surrounding environment. The condition is worsened by a scenario in which the child is either too little to give an account or where she points accusing fingers to some adults. We report a case of bleeding from the vulva from urethral prolapse masquerading as suspected sexual abuse from an unknown adult.

Keywords: Pre-pubertal girls, urethral prolapse, urogenital bleeding

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INTRODUCTION

Urethral prolapse is defined as the complete eversion of the terminal urethra from the external meatus.[1,2] It appears as a round doughnut-shaped mucosa protruding from the urethral opening. It is a rare condition that is often misdiagnosed.[2-4] When it does occur, it is usually among pre-pubertal girls and post-menopausal women, giving it a bimodal age distribution.[5,6] Urethral prolapse occurs almost exclusively in african girls between the ages of 1 and 9 years, with an average age of presentation of 4 years.[6-9] Among the post-menopausal women, it is more common in the caucasians.[1] Most of the times, medical treatment with topical oestrogen cream and follow-up are sufficient, but failure of this may demand a surgical correction.[5] We report the case of a young Nigerian girl with urethral prolapse who presented with urogenital bleeding wrongly adduced to suspected sexual abuse by an unknown adult. This case brings to the fore the need to heighten awareness of the condition by physicians so as to avoid the unpleasant consequences of a misdiagnosis.

CASE REPORT

E.G is a 3-year-old girl who was referred from a health centre with a diagnosis of sexual abuse. She presented to the Children Emergency Room of the University of Benin Teaching Hospital with a crowd of relatives (both maternal and paternal) and neighbours on 8th September, 2015, with a 19-hour history of bleeding from the vulva.

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Further history revealed that the child had passed the night in her maternal aunt's house who noticed the bleeding the evening before while she was giving her a bath. Enquiry into the possibility of genital contact with an adult yielded no result as neither mother nor aunt could say if the child had been assaulted and if so, by whom. The landlord of the house the parents rented was a part of the crowd. He wanted to get to the end of the matter since the allegation of sexual abuse occurred in his house. When parents and relatives probed to find out if anyone touched her by pointing at some young men who lived in the compound with them, the child simply said yes to each of them. She was the last of four children (all girls) born to middle-class civil servants with tertiary level of education.

General examination revealed a well-grown, apprehensive, pre-school girl who was not pale, afebrile, anicteric, not cyanosed, not dehydrated and with no peripheral lymph node enlargement. Vital signs revealed a body temperature of 36.6°C, pulse rate of 106 beats/min and respiratory rate of 20 cycles/min. Examination of the cardiovascular, respiratory, gastrointestinal and central nervous systems revealed normal findings. However, the genitourinary system examination revealed a fresh blood-stained vulva. An initial diagnosis of sexual assault was made by the attending registrar who requested a gynaecological review. They noted a well-circumscribed fleshy mass at the external urethral meatus [Figure 1]. The mass was hyperaemic and soft in nature. There was no bleeding on contact, no bleeding per vagina, hymen was intact and there was no lacerations or excoriations. A size 6 urethral catheter was gently passed through the meatus which led to voiding of urine from the centre of the fleshy mass.

A diagnosis of urethral mucosal prolapse was made. Her haematocrit was 33%. Urine microscopy, culture and sensitivity were not done. Parents were counselled on the diagnosis. The child was placed on topical oestrogen cream to be applied on the vulva two times daily for 4 weeks and amoxycillin-clavulanate suspension for a week. She was discharged on the day of presentation to be seen 3 days afterwards at the gynaecological clinic. At follow-up, she complained of spotting which occurred 2 days after the initial diagnosis was made and had not bled since then. The fleshy mass had reduced in size. On further follow-up 6 weeks later, the mass had regressed completely.

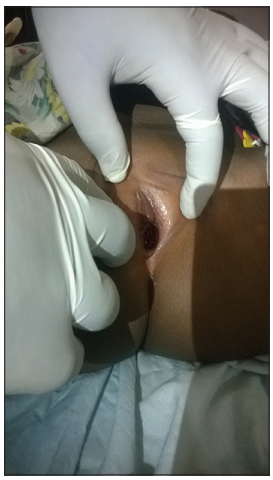

Figure 1: Doughnut-shaped protrusion of the urethral mucosa

DISCUSSION

Urethral prolapse is the protrusion of the distal urethra through the external urethral meatus leading to vascular congestion and oedema of the prolapsed tissue.[3,10] The protruding mass appears circular and is covered by easily bleeding mucous membranes.

The exact cause of urethral prolapse is unknown. Proposed theories include congenital defects such as weak pelvic floor muscles or intrinsic abnormalities of the urethra. Low levels of the oestrogen hormone are believed to play a role due to the preponderance of the condition in the pre-pubertal and post-menopausal age groups.[6,7] Risk factors include increased intra-abdominal pressure from chronic coughing or constipation. Additional possible risk factors in the elderly include poor nutrition and hygiene as well as loss of oestrogen at menopause.[1] Perineal trauma, including sexual abuse, has to be ruled out in all cases for it can possibly lead to urethral prolapse.[11,12]

The most common presentation is urogenital bleeding.[2,4,7] Patients usually present with a history of blood-stained underwear or diapers. Urethral prolapse may also be asymptomatic, only discovered during routine physical examination. Haematuria is not a common presentation. Urinary symptoms such as dysuria and frequency are rare in children, although a case that presented with acute urinary retention has been reported in Tanzania.[13] Physical findings include the characteristic circular mass protruding from the external meatus of the urethra. The mass may be tender if ulcerated. Medical attention is sought mainly by the post-menopausal group because of the severity of urinary symptoms such as nocturia, frequency, dysuria, urgency and tenesmus.[14]

The diagnosis of urethral mucosal prolapse is clinical. It is diagnosed by confirming that a central opening is present within the protruding tissue. This can be observed by catheterizing the opening or observing that urine comes out from the opening during voiding. In this case, the attending

registrar misdiagnosed the condition. Diagnosis was made with the help of the gynaecologist to whom consult was sent. Several literatures have documented the high rate of misdiagnosis of urethral prolapse.[2,4] In a retrospective study spanning 11 years involving 24 patients, the initial diagnosis made by the referring paediatrician or emergency physician was correct in only five cases (20.8%). A contributory factor may be due to the fact that the condition is uncommon.[2] The condition has been mistaken for a malignant tumour, injuries from sexual abuse or a vaginal bleed.[3,8,10,15] Other differential diagnoses include urethral caruncle, ectopic ureterocele and rhabdomyosarcoma. The current case was misdiagnosed as sexual abuse. Making the correct diagnosis in the present case averted serious medico-legal problems that would have ensued.

Medical treatment involves the use of topical vaginal oestrogen cream. Some series reported complete involution of the prolapsed urethra in 3–6 weeks. Topical antibiotic cream and regular sitz bath are recommended as part of medical management of this condition.[15] While some studies suggest that urethral prolapse in children can be managed without surgical intervention,[14] others reveal that most children eventually require resection of the prolapsed urethral mucosa.[2,8] In general, surgical excision yields good results but sometimes may result in some complications such as urethral stenosis, urinary incontinence and recurrence of the prolapse.[16] In Cotonou, surgical repair is routinely undertaken because the long-term follow-up of the children is erratic and unreliable.[4]

Parental reassurance is an integral part of the management of urethral prolapse.[10] In this case, the disharmony within the family was resolved when it was realised that there was no case of sexual abuse.

Surgery, though rarely performed among pre-pubertal girls, is the treatment of choice if medical therapy fails to reduce the prolapse and in severe cases such as those with significant bleeding, thrombosis or gangrenous changes. Surgery may involve quadrant-by-quadrant excision of the prolapsed tissue followed by mucosal-mucosal anastomosis.[17]

CONCLUSION

Urethral prolapse is a rare disease found among african pre-pubertal girls often misdiagnosed by clinicians. The parents are often frightened thinking that it is sexual abuse. The diagnosis is clinical, and can be made if the awareness of the condition by physicians is heightened. This may aid accurate and early diagnosis and thus prevent anxiety and unnecessary parental fright or family tension.

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Conflicts of interest
There are no conflicts of interest.

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