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Congenital Prepubic Sinus: An Experience from Southern Highland of Tanzania

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Abstract

Congenital Prepubic sinus is a rare entity of urogenital system in which there is a tract originating from the skin overlying pubic symphysis having a blind end just at the base of penis, near the clitoris or just near the anterior bladder wall. In most cases, it is associated with mucopurulent secretion. We present a male client of 2 years with abnormal opening on the suprapubic region which was discharging a foul-smelling thick fluid since birth. Sinogram was the investigation of choice done to confirm the diagnosis. He then underwent a successful Sinus Excision. The condition has a good prognosis after surgical intervention. Dorsal urethrocutaneous fistula is an immediate differential diagnosis of prepubic sinus.

Keywords

Prepubic Sinus, Urethrocutaneous Fistula, Excision, Sinogram

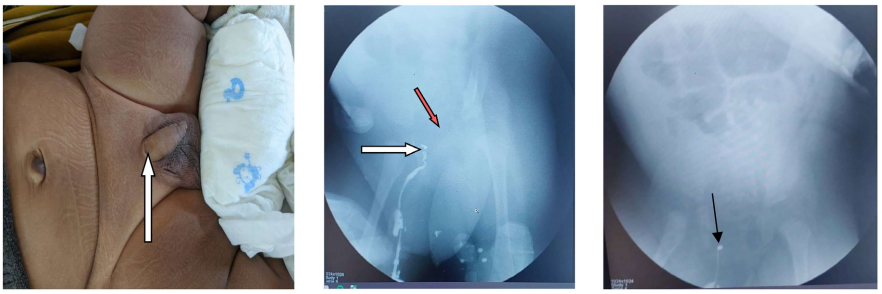
1. Introduction

Congenital prepubic sinus is an exceptionally rare anomaly of a tract from the skin overlying the pubic symphysis just above the penis or clitoris and has a blind ending. Its etiology is still uncertain, however, the proposed theories are intussusception during fusion of anterior abdominal wall, incomplete urethral duplication and congenital fistula of urogenital sinus [1]. Its anatomical features differ from case to case [2] [3]. It is believed to be a form of dorsal urethral duplication and also a variant of epispadias. In some cases, it is associated with a purulent discharge from the opening overlying the pubic symphysis. The majority of the re-

ported cases in the literature have this sinus in the midline of the pubic symphysis [2] [4] [5]. There are three types of this condition which are classified according to the location of the skin opening but also the course of a tract, Type 1; tract opening is near the pubic symphysis, Type 2; tract is opening just above the pubic symphysis and Type 3; tract opening on the anterior abdomen. These tracts do not communicate with the urinary bladder [3]. So far there are as few as 50 cases reported in the medical literature since its first description in 1987 by Campbell *et al.* [6] [7]. The sinus has been reported in both genders and treatment is almost always surgical intervention especially in the presence of abnormal secretion from the sinus [8].

2. Case Presentation

We present a 2-year-old male with on-and-off suprapubic discharge since birth which was sometimes foul-smelling and discharging whitish thick fluid upon pressing. Occasionally the discharge was significant however, in some days, there was no discharge unless the pubic area is compressed. There was no association of discharge with voiding. The parents sought medical advice at one point early in life and they were asked to wait for spontaneous healing. No history of fever, nausea or vomiting was reported. There was no history of excessive crying during passing urine. He had normal bowel emptying. He is the first born in the family. Physical: Health looking baby, alert, active. Per abdomen: Not distended, symmetrically moves with respiration equally, there was a sinus/dimple just near the pubic symphysis, no obvious discharge was seen, unless during compression in which a thick purulent whitish to yellowish discharge surfaced (**Figure 1(a)**), tympanic percussion note, bowel sounds were heard and normal, other systems were essentially normal.



(a) (b) (c)

Figure 1. (a) Above an arrow showing an opening (dimple) near the symphysis pubis (Type 1 Prepubic Sinus), while (b) and (c) arrows showing a sinus tract with blind ending during sinogram. Note in (b) Position of Sinus with respect to the Pubic symphysis (White and Red arrows respectively).

Laboratory: Complete blood count: Hb: 13 g/dl with normal levels of platelets and white blood cells, Creatinine was normal, random blood glucose was within normal range, Urinalysis was normal. Culture from the suprapubic discharge

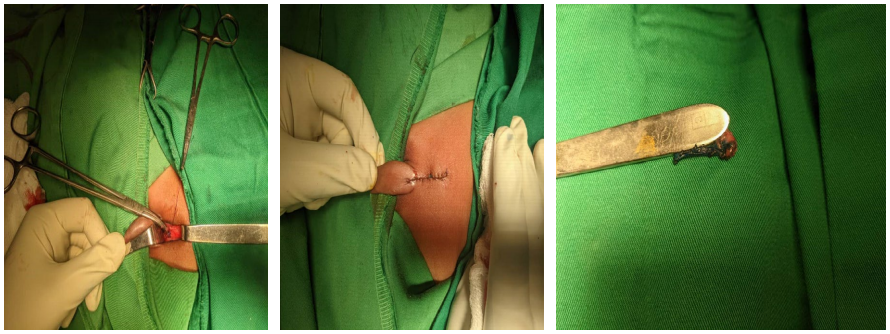
there was no growth.

Imaging: KUB Ultrasound: There were normal findings.

ECHO: No significant finding.

Sinogram: Contrast ended at a blind end tract; there was no contrast that leaked to the urethra as seen in **Figure 1(b)** and **Figure 1(c)**.

He underwent complete Sinus excision and intraoperatively urethral catheter was introduced (Siliconized Foley catheter 6Fr) using a probe the sinus was tracked and noted to have a blind end just at the root of penis. Using dye test, it was not possible to push the dye more than 2cc through the sinus. No dye was visible through the external urethral meatus. A vertical incision was then done and the sinus was followed up using bipolar diathermy near the base of the penis and it was excised completely. Monocryl 3.0 was then used to close the layers as seen in **Figures 2(a)-(c)**. Urethral catheter was removed immediately after surgery. Unfortunately, the excised sinus track was not taken for histopathological analysis. Hospital stay was 2 days. Post operative clinic visit was at 2 weeks then a month and he was discharged from clinic after three months follow up in which there was no more discharge that was reported, and the wound healed with no complications.



(a) (b) (c)

Figure 2. (a) above showing a vertical incision during sinus excision, (b) showing a suture line after successful sinus excision while (c) shows an excised sinus tract.

3. Discussion

Congenital prepubic sinus is uncommon and has several theories trying to explain its etiology. The sinus is active in some clients leading to abnormal secretions in which some are foul smelling. The discharge may be mistaken as urine leakage. The gender ratio is currently not clear however it is more common seen in males in the few cases that are reported in the English literature [6]. The recommended diagnostic investigations are sinogram/retrograde sinogram however some studies recommend addition of voiding cystogram and Magnetic Resonance imaging (MRI) although it has to be noted that this condition lacks clear diagnostic and treatment guidelines in the literature [7] [9]. The case presented here had only sinogram done to reach the diagnosis. The management throughout the literature is surgical intervention that involves sinus excision and it is reported to have good prognosis with shorter hospital stay [9].

4. Conclusion

Congenital prepubic sinus can be mistaken with a dorsal urethrocutaneous fistula however in fistula there is a communication with the urethra unlike in prepubic sinus which is noted to have a blind end. Imaging is used to confirm the diagnosis before treatment. This entity is not life-threatening and is managed surgically in all the cases reported in the literature.

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Ethical Approval

Ethical approval was obtained from Mbeya Zonal Referral Hospital (MZRH).

Consent

Informed written consent was obtained from the parents and they allowed this information to be published.

Authors' Contribution

Each author participated equally in every level of evaluating the patient, summarizing patient's particulars and history including physical examination; also follow-up of the patient post-treatment.

Conflicts of Interest

There was no conflict of interest to declare. This study was solely supported by authors.

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