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Case Report

Perineal groove: a clinical caveat and an operative dilemma

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ABSTRACT

The perineal groove is a rare anomaly of the anogenital region in females, unfamiliar to many clinicians. It is characterized by a wet strip running vertically between the anterior edge of the anal orifice and posterior fourchette. Due to the rarity of its occurrence, it is often misdiagnosed and mismanaged. We report a case of a 2-year-old female child with perineal groove who underwent surgery with an excellent cosmetic outcome and preserved continence.

Keywords: Perineal groove, Anorectal malformation, Perineum

INTRODUCTION

Perineal groove is characterized by an exposed moist mucosa lined sulcus that extends from the posterior fourchette to the anal orifice.[1] It may resolve spontaneously before the age of 2 years. However, the non-epithelialized mucous membrane of the perineal groove increases the occurrence of local irritation due to constant dampness, followed by itching and presents as a dermatitis or rarely even as a urinary tract infection. Perineal groove may present clinically as contact dermatitis, sexual abuse and anal fissure leading to mismanagement.[2] In order to deliver suitable parental counselling and management of the condition, health care providers must accurately diagnose the perineal groove.

CASE REPORT

A 2-year-old female child was brought by parents with complaints of an abnormal lesion around the anal opening. Patient was a full term normal vaginal delivery with history of NICU admission for 15 days in view of very low birth weight of 1.4 kg. The lesion was present since birth but as there were no complaints of constipation or faecal incontinence, the parents had not sought medical opinion. There was no history of discharge or itching or excoriation in the perineal region. There was no burning micturition. On examination, patient had a normal vestibule with two openings. The anal opening was anteposed, with a 5 mm mucosa lined tract extending from 12 o' clock of anal opening upto the vestibule suggestive of a perineal groove (Figure 1).

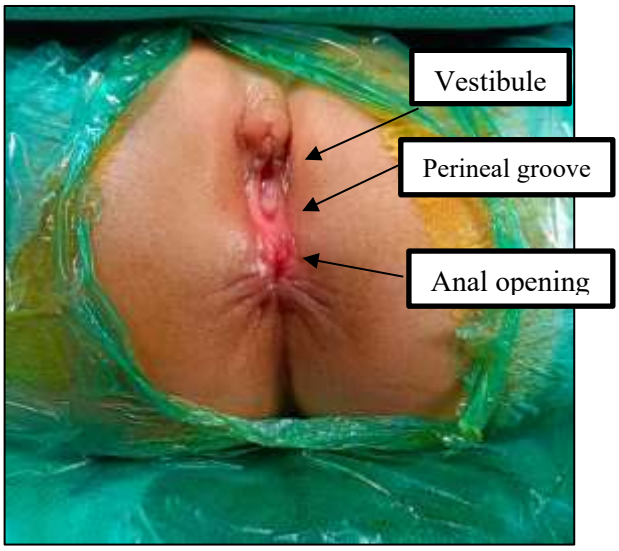

Figure 1: Perineal groove.

Figure 2: Incision for surgery.

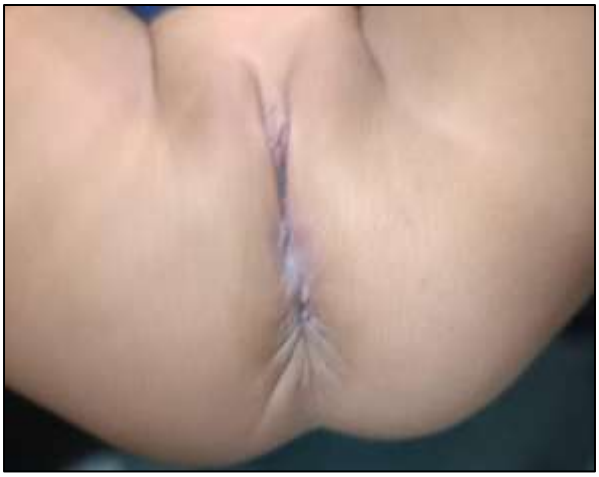

Figure 3: Post operative follow up at 2 months.

There was no discharge from the groove and no perianal excoriation. She was continent. X-rays of the spine and renal sonography were normal. As the patient was 2 years of age and the perineal groove had not resolved on its own over the course of time, the decision for surgical intervention was taken. A simple excision of the strip with suturing in the midline may have caused scar contraction further aggravating the proximity of the anal opening to the vestibule. Therefore, Patient underwent mucosal strip excision and Z-plasty (Figure 2). On post operative follow up patient had intact anal continence with good cosmetic outcome (Figure 3).

DISCUSSION

A perineal groove is a rare anorectal malformation in females with very few reported cases in males.[1,3] It was first described by Stephens in 1968.A wet red sulcus which runs from the anal opening just up to the posterior vaginal fourchette is commonly referred to as the perineal groove. It is usually a solitary finding. Rarely, it may be associated with other genital or urological abnormalities like hypospadias, rectal prolapse, imperforate anus, or perineal ectopic anus.[1]

There is no clear known pathogenesis for development of perineal groove. One of the proposed theories emphasizes on the incomplete fusion of the labioscrotal folds during development of the external genitalia leads to formation of perineal groove. Abnormal fusion of the medial genital fold has also been postulated. An alternative hypothesis suggests that perineal groove is a remnant of the cloacal duct due to a defect in the urorectal septum between 5-8th week of gestation. Hence, any abnormality in its formation after the anogenital division may cause the formation of a groove. There is adequate histological evidence to prove that groove is derived from urorectal septum.[4-7] The above-mentioned theories are all suggestive of local developmental anomalies. This could explain the fact that perineal groove is an isolated occurrence with no associated abdominal or pelvic anomalies.[8]

In his research on the perineal groove, Stephens outlined three requirements that must be fulfilled in order to identify this malformation namely, a wet groove, hypertrophy of minora tails and normal anatomy of both genitalia and urethra.[8] Since it is otherwise asymptomatic, the diagnosis is based on clinical criteria.[2,9] Patients with this congenital malformation are at an increased risk of urinary tract infection, inflammation, or infection of the nonepithelized mucosa, constipation, or faecal incontinence and other associated regional anomalies.[2,8] Perineal groove may present as inflammation of the perineum and may be misdiagnosed as infection, irritant dermatitis, ulcerated haemangioma, lichen sclerosis or trauma.[8] The lesion warrants early surgical correction if the persistent dampness causes irritation and itching followed by infection or dermatitis like picture.[2,10] Surgical correction is indicated for cosmetic purpose, if the lesion fails to epithelialize by the age of 2 years.

CONCLUSION

Early identification of congenital perineal groove is essential to empower informed parental decision-making, facilitate proper follow-up, and prevent unwarranted interventions that may arise from misdiagnosis.

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