Baby's bottom bump: A case report of perianal swelling in a 6-month-old infant

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SUMMARY

Infantile perianal pyramidal protrusion (IPPP) is an uncommon benign pyramidal shaped protrusion of perineal tissue from the midline raphe of the perineum. Here we present a case of IPPP in a 6-month-old girl with a perianal swelling which resembles perianal excoriation with skin tag. She had a spontaneous, painful perianal bulge with erythema for two weeks in duration, that gradually increased in size. She had constipation for two weeks prior to the onset of symptoms, despite being fully breastfed. Her medical history was unremarkable. There were no concerns regarding sexual abuse or any history of local infections. Her pain improved with conservative treatment and the swelling regressed spontaneously by more than 50% after three months without further intervention. This case report points out that IPPP is an uncommon benign perianal protrusion which could be easily diagnosed via clinical evaluation. Histopathological findings include acanthosis, upper dermal oedema, and a mild inflammatory infiltrate. It is more prevalent in pre-pubertal females, and is believed caused by congenital, acquired mainly due to mechanical friction, or inflammatory changes due to genital lichen sclerosus et atrophicus (LSA). Treatment primarily involves conservative management, as most lesions will spontaneously resolve or with the treatment of underlying causes. Awareness of IPPP helps prevent overtreatment and unnecessary evaluation, thereby avoiding incorrect assumptions regarding sexual abuse or other anogenital disorders.

INTRODUCTION

Infantile perianal pyramidal protrusion (IPPP) is an uncommon benign pyramidal shaped protrusion of perineal tissue originating from the perineal midline raphe. Here we report a case of IPPP involving a six-month-old girl with a perianal mass mimicking perianal excoriation with skin tag. Lack of recognition may result in overtreatment and causing excessive concerns among clinicians and parents.

Hence, this case report underlines the necessity of recognizing IPPP, via thorough clinical evaluation and identifying its classic morphology. It is crucial to prevent unnecessary investigations for sexual abuse or other anogenital conditions, as the clinical evaluations can have medicolegal implications and may be very distressing for both the patient and the family.

CASE PRESENTATION

A six-month-old girl was brought to the Primary Care Clinic due to a noticeable spontaneous, painful perianal bulge with erythema that was gradually increasing in size over two weeks in duration. Crying episodes became more frequent upon defaecation and when the swelling was touched. She was subsequently treated for perianal excoriation and skin tag with local analgesia, Topical Lignocaine 2% gel and Zinc oxide cream. Although the perianal pain improved over the following weeks, the swelling persisted despite ongoing treatment.

The child had a two-week history of constipation despite being fully breastfed. The mother expressed concern about her child's bowel habits, as she was regularly changing diapers three times a day, with stools consistent with Bristol Stool Scale type 6. However, the frequency has now reduced to once daily, with stools consistent with Bristol Stool Scale type 4, and this change is associated with increased crying episodes upon defaecation. The medical history was otherwise unremarkable. There was no history of sexual abuse and no maternal history of cervical dysplasia, human papilloma virus infection, or condyloma acuminata.

Clinical evaluation revealed normal pre-pubertal genitalia. Upon perineal inspection, we noticed a flesh-coloured elongated, pyramidal lesion, measuring 4mm x 2mm, extending from below the vaginal vestibule to the superior aspect of anal verge. The surrounding perianal skin appeared excoriated and erythematous, as shown in Figure 1. No bleeding or skin cracks were noted. The child was diagnosed as IPPP based on clinical diagnosis, and the parents were given reassurance. The child continued to receive Topical Lignocaine 2% gel and Zinc oxide cream. The constipation subsided after the parents were advised to maintain adequate hydration via on-demand breastfeeding. After three months, the swelling spontaneously regressed by more than 50% without further intervention, and she was discharged from the clinic.

DISCUSSION

Infantile perianal pyramidal protrusion (IPPP) was first described by Kashiyama et al (1996) and has since only been studied through case reports and observational studies.[1-4] It presents in a variety of shapes, but it is commonly described as pyramidal, papular, leaf-like, peanut-shaped, tongue-like, and hen's crest-shaped projection mimicking morphology of

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Table I: Differential Diagnosis of Infantile perianal pyramidal protrusion[7-10]

Condition	Clinical Features
Infantile perianal pyramidal protrusion	• Pyramidal, smooth surface, perianal protrusion, non-tender • Arising from the midline raphe of the perineum
Skin tags	• Asymptomatic, round, soft, skin-coloured, pedunculated with a stalk
Rectal prolapse	• Bright or dark red, non-tender mass protruding from the anus • Arising from the anal region
Haemorrhoids	• Mass protruding from anus • May present with painful or painless rectal bleeding, or tenesmus
Granulomatous perineal lesions of Crohn's disease	• Perineal plaques, papules, and nodules • May be associated with perineal ulceration, fistula, or abscess • Arising from anogenital region
Sexual abuse	• Painful perianal bruising or laceration with exposure of tissues beneath the dermis • May be associated with bruising, abrasions, scarring, or residual healing injuries to the surrounding anogenital structures
Haemangiomas and other vascular malformations	• Deep lesions appear bluish, while superficial lesions are bright red • May be associated with bleeding, ulceration, or infection • May involve more than one anatomical site
Condyloma acuminata	• Multiple flesh-coloured, velvety plaques, discrete warty papules, or cauliflower-like growth, non-tender • Arising from perineal region • More common in sexually active individual • Caused by the HPV virus
Molluscum contagiosum	• Discrete, firm, dome-shaped, smooth surface, pearly white or flesh-coloured, waxy papules with characteristic central umbilication • Arising from moist regions and areas where the skin rubs

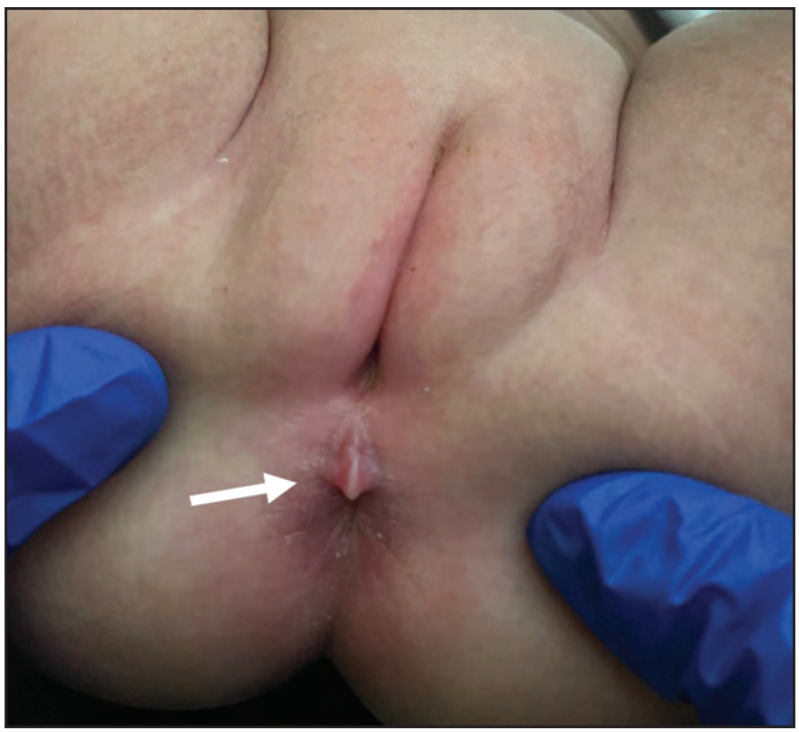

Fig. 1: A pyramidal-shaped protrusion on the anterior to the anus, measuring 4mm x2mm (white arrow) with smooth and slightly erythematous perineal skin surface. (The above photograph was consented by the patient's parents)

a skin tag.[2-3] A recent observational study from United States described IPPP as a benign condition that predominantly occurs in pre-pubertal females, aged ranging Day 1 of life to 4 years.[4] IPPP is relatively uncommon, and the most recent nearby cases were reported in Japan.[1,5] To our knowledge, this is the first case reported in Malaysia.

The colour of the lesion may vary from flesh-coloured to red or pale depending on the perineal condition. Dermatological conditions such as diaper dermatitis or perianal excoriation may contribute to the skin changes.[2-3] IPPP is typically located anterior to the anus, on the midline raphe of the perineum.[2] Histopathological studies shown relatively nonspecific findings, including acanthosis, upper dermal oedema, and

mild inflammatory infiltrate.[1] The differential diagnoses includes, skin tag, rectal prolapse, rectal polyp, external haemorrhoids, granulomatous perineal lesions of Crohn's disease, sexual abuse, haemangiomas and other vascular malformations, condyloma, and molluscum contagiosum.[2-3] The clinical features of these anogenital conditions are summarized in Table I.

Various theories explained the mechanisms of IPPP formation: (1) Congenital anatomic weakness of median raphe or a remnant of urogenital septum, as there were cases reported with new onset of perianal lesions after constipation episodes supporting the Valsalva manoeuvre theory, (2) Acquired lesion from diarrhoea, fistulas and anal fissures; likely secondary to mechanical irritation and (3) Inflammatory changes related to genital lichen sclerosus et atrophicus (LSA).[2-3] In this case study, the lesion may have arisen from either a congenital cause or an acquired cause, such as constipation, which contributed to the painful perianal excoriation.

Many studies indicate that IPPP decreases in size or resolves spontaneously over time.[2-5] In acquired cases, serial follow-up is required to manage precipitating factors, including supportive therapies such as analgesia and laxatives, along with dietary modifications like adequate hydration, are recommended to address constipation if present.[2-3] Topical corticosteroids may be prescribed for the presence of LSA.[2-3]

This case report underlines that lack of recognition of IPPP may result in overtreatment and causing excessive concerns among clinicians and parents. It is crucial to prevent unnecessary investigations for sexual abuse or other anogenital conditions, as the clinical evaluations can have medicolegal implications and may be very distressing for both the patient and the family. A previous case presentation by Margulies et al. (2024) reported that most clinicians would opt against invasive procedures such as biopsies, especially in sensitive regions, as these procedures can cause discomfort for both the patient and the parents.[6] Furthermore, a misdiagnosis of sexual abuse can potentially lead to significant emotionally distress for the family.[6]

CONCLUSION

IPPP is an uncommon benign perianal protrusion that can be easily diagnosed via thorough clinical evaluation. IPPP is mainly treated conservatively as they are mostly self-limiting or by treating underlying causes. Awareness of IPPP and accurate identification of its clinical features may aid in prevention of overtreatment and unnecessary evaluation in the future. Unnecessary evaluations can lead to incorrect assumptions about sexual abuse or other anogenital disorders, potentially resulting in medicolegal implications and causing distress for both the patient and the family.

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DISCLOSURE

The case report is registered under National Medical Research Register (NMRR ID-24-01557-WAR). The patient's parents had given informed consent to publish the clinical details in this case report. This study does not have conflict of interest between the authors and there was no funding received for this article.

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