

Unilateral Vulvar Pseudoverrucous Papules and Nodules in a Young Yemeni Girl: A Case Report

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1. ABSTRACT

We present the case of a six-year-old Yemeni girl with a three-month history of mildly itchy nodules restricted to the right labium majus and perinium. The lesions developed following severe diaper dermatitis caused by diarrhea and a urinary tract infection. Cutaneous examination revealed multiple firm, dome-shaped, smooth nodules and plaques, some of which exhibited a black hue at their centers. Based on the medical history and clinical findings, the patient was diagnosed with pseudoverrucous papules and nodules. She was treated with topical adapalene gel and mometasone cream twice daily for one week, after which the lesions began to regress. The treatment was then tapered to once daily, and the lesions disappeared completely after four weeks.

2. PLAIN LANGUAGE SUMMARY

We report the case of a young Yemeni girl who presented with papules and plaques restricted to the right side of the vulva. This clinical presentation has not been previously described. Notably, the patient was successfully treated with topical medications, and improvement was observed within weeks. This case report will contribute to the knowledge gap among clinicians regarding this extremely rare condition, thereby helping to improve the effectiveness of treatment for future cases.

3. KEYWORDS: Dermatology; Irritant diaper dermatitis; Pediatric medicine; Labium Majus; Perineum

4. INTRODUCTION

Irritant diaper dermatitis (IDD) is a common, mild-to-severe inflammatory skin condition in children that is typically caused by prolonged exposure to urine, stool, or both [1]. The most common types of IDD include pseudoverrucous papules and nodules (PPN), Jacquet dermatitis, and granuloma gluteale infantum [2]. Although

PPN was originally described in individuals who had undergone colostomies or urostomies, it can also arise in children after severe or persistent diarrhea [3].

In general, PPN is extremely rare, and unilateral presentation is even less common. To date, only 16 cases of perianal PPN have been reported, all of which occurred in children (Table 1). Furthermore, only two pediatric cases of perivulvar PPN have been reported. To the best of our knowledge, no case of unilateral vulvar PPN has been previously published (Table 2). As most clinicians have limited experience with PPN, the condition is likely to be misidentified and misdiagnosed. Therefore, a more comprehensive understanding of PPN will facilitate its recognition and management. In the present report, we describe an atypical presentation of this extremely rare condition.

Table 1: Reported cases of perianal pseudoverrucous papules and nodules.

Year of publication	Auth or	Title	Journal	Country	Sex and Age (years)	No	Associated diseases
1992	Gold berg NS	Perianal pseudoverrucous papules and nodules in children [2].	Arch Dermatol		M (3), F (10), M (15), M (32 mo), M (3.5)	5	
1994	Rodríguez Cano L	Perianal pseudoverrucous papules and nodules after surgery for Hirschsprung disease [6].	J Pediatr	Spain	M (27 mo.), M (2)	2	After surgery for Hirschsprung disease
2001	Amir y SA	Perianal pseudoverrucous papules and nodules mimicking condylomata acuminata and child sexual abuse [7].	Cutis	USA	M (8)	1	
2012	Lee YY	Multiple erythematous erosive papules and nodules on the perianal area of an 84-year-old bedridden woman [8].	Dermatol Sin	Taiwan	F (84)	1	
2013	Dand ale A	Perianal pseudoverrucous papules and nodules [9].	Indian J Sex Transm Dis AIDS	India	F (14)	1	Incontinence of stool and urine
2017	Yap FHX	Perianal pseudoverrucous papules and nodules in Hirschsprung's disease: rapid resolution with oral loperamide [10].	Pediatr Dermatol	Australia	M (2)	1	Hirschsprung's disease
2023	Kim EH	Perianal pseudoverrucous papules and nodules in an elderly patient [11].	Clin Cosmet Investig Dermatol	Korea	F (84)	1	Infrequent diaper change
2024	Roka de PR	Multiple perianal papules and nodules in a child: an intriguing entity [12].	Egypt J Dermatol Venereol	India	M (4), M (4), M (2)	3	
2025	Kurdi A	Pseudoverrucous papules and nodules in the perianal area: a case report [13].	Cureus	Saudi Arabia	M (13)	1	
					Pediatric	14	M (12), F (2)
					Adult	2	F (2)
					Total	16	

F: Female; M: Male; Mo: Month; No: Number

Table 2: Reported cases of perivulvar pseudoverrucous papules and nodules.

Year of publication	1 st Author	Title	Journal	country	Age (years) and sex	No .	Associated diseases
2011	Garrido-Ruiz MC	Vulvar pseudoverrucous papules and nodules secondary to a urethral--vaginal fistula [14].	Am J Dermatopathol	Spain	F (10)	1	Urethral--vaginal fistula
2022	Kauffman RP	Perivulvar pseudoverrucous papules and nodules in a 4-year-old girl with urinary and fecal incontinence: case report [3].	J Pediatr Adolesc Gynecol	USA	F (4)	1	Urinary and fecal incontinence

F: Female; No: Number

5. CASE REPORT

A six-year-old Yemeni girl presented with a three-month history of mildly itchy nodules restricted to the right labium majus and perinium. According to her mother, the lesions developed following severe IDD caused by diarrhea and a urinary tract infection. Cutaneous examination revealed multiple firm, dome-shaped, smooth nodules and plaques, some of which exhibited a black hue at their centers. The lesions were primarily restricted to the right labium majus and the right side of the perineum, although one was located on the right side of the perianal area (Figure 1a).

Based on the medical history and clinical findings, PPN was included in the differential diagnosis. However, the parents declined a biopsy, which prevented histopathologic confirmation. Nevertheless, the patient was ultimately diagnosed with PPN. She was treated with topical adapalene gel and mometasone cream twice daily. Lesion regression was observed after one week; therefore, treatment was tapered to once daily. Complete remission occurred after four weeks (Figure 1b, 1c).



Figure 1a: Unilateral right-sided presentation of pseudoverrucous papules and nodules. Multiple dome-shaped, smooth, firm nodules and plaques restricted to the right labium majus and right side of the perineum. Some lesions exhibit a black hue at their centers. One lesion is located on the right side of the perianal area.



Figure 1b: Moderate improvement after one week of topical steroid and retinoid



Figure 1c: Complete resolution of lesions four weeks after initiation of topical steroid and retinoid.

6. DISCUSSION

The present report describes a case of PPN, a rare complication of IDD that exhibits a variable presentation [4]. To the best of our knowledge, this is the first case of PPN to occur unilaterally on the labium majus, and the first case in Yemen overall.

The primary risk factors for PPN are urinary and/or fecal incontinence. More rarely, severe or prolonged diarrhea can contribute to its development [4]. This case was unique in two ways. First, the PPN was caused by improperly managed diarrhea. Second, the lesions demonstrated a unilateral distribution. Tambe et al. described a 10-year-old girl with female epispadias and a bifid clitoris who presented with similar lesions; however, the distribution was bilateral and symmetrical [5]. They treated their patient with topical mometasone alone, which induced significant regression of the lesions after two weeks [5]. Maekawa et al. reported two cases of hemilateral perianal distribution of granuloma gluteale infantum in which the lesions were confined to a single buttock [6].

7. CONCLUSION

To the best of our knowledge, this is the first reported case of unilateral vulvar PPN. The observations and treatments described in this report will help address the knowledge gap among clinicians regarding this extremely rare condition, thereby improving the quality and effectiveness of treatment.

8. REFERENCES

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