

Pseudoverrucous Papules and Nodules in an Infant with Penoscrotal Hypospadiasis

Sir,

A 10-month-old male child presented with itchy, reddish, raised lesions over the scrotum of 4 months duration. The baby was born with penoscrotal hypospadias with doubling of urethra. In addition to the normal urethral orifice at the glans penis, the child had another urethral opening on the ventral aspect of the shaft of the penis. Though there was no history of continuous dribbling of urine, urine flow through the proximal ventral urethral opening was causing maceration of the skin around external genitalia.

Cutaneous examination revealed multiple minimally erythematous papules with overlying erosions as well as ulcerations distributed in close proximity to the penoscrotal urethral orifice. The lesions were distributed on and either side of the median raphe but more so on the left side. Few erosions showed evidence of partial healing [Figure 1]. The child was treated earlier for scabies and intertrigo without any improvement. Based

on the history and clinical examination, the child was diagnosed to have pseudoverrucous papules and nodules (PPN). As the lesions were in the genitalia, the mother was not willing for biopsy. On advising topical clobetasone 0.05% cream twice daily along with frequent wiping of the area, there was significant improvement within 1 week; 2 weeks later, there was near complete resolution of the skin lesions [Figure 2]. The parents were asked to follow these precautions and advised to use zinc cream till definitive surgery was done.

PPN is a rare form of diaper dermatitis occurring due to prolonged wetness.^[1] It presents as gray or erythematous, erosive/verrucous papules, plaques and nodules in the genital and peristomal sites of all ages.^[2] Chronic urinary and stool incontinence secondary to urogenital anomalies, occult spinal dysraphism, and various urological and gastroenterological procedures lead to severe irritation of the diaper region causing PPN.^[3,4]



Figure 1: Multiple erythematous, erosive papules and nodules involving the scrotum

The pathogenesis is similar to that of other forms of irritant contact dermatitis occurring in the diaper area. The most important factor is moist environment, over hydration of skin causing maceration, increased permeability of the skin, and ammonia from urine. Scrotal skin has a higher chance of developing irritant reaction.^[2,4] Although our patient did not have continuous dribbling of urine, the lesions developed on scrotum as urine from ventral aspect of penis was in frequent contact with the skin on under surface of the scrotum.

Granuloma gluteale infantum has morphological and histological overlap with PPN, and Jacquet's erosive dermatitis is also considered to be a part of the same clinical spectrum as PPN, representing chronic irritant contact dermatitis.^[5,6] Therefore, a new term "erosive papulonodular dermatosis" was coined to include all the three variants of irritant contact dermatitis.^[7]

PPN mimics certain serious dermatoses such as condyloma lata, condyloma acuminata, cutaneous metastasis, and cutaneous Crohn's disease. Other differential diagnoses include bacterial infections, candidiasis, pemphigus vegetans, and halogenodermas.^[3,6]

As PPN is a chronic irritant reaction, histopathology shows psoriasiform epidermal hyperplasia and reactive acanthosis without significant dermal inflammatory infiltrate in most cases.^[3,4,8] However, microscopic examination is rarely required for the diagnosis.^[2]

Treatment is mainly aimed at removal of precipitating factor and prevention of secondary infections.^[4] Zinc cream as barrier and topical steroids are used to treat PPN.^[6]



Figure 2: Complete resolution of lesions after topical steroid application

Some authors have mentioned urinary alkalinization with oral ascorbic acid and acetic acid soaks.^[8]

We are reporting this case as one must be aware of this entity, not just in the setting of peristomal dermatitis but also in case of any chronic irritation caused by urine and feces so that unnecessary investigations can be avoided.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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