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Case Report

Pseudoverrucous papules and nodules in an elderly woman with encopresis: effects of cryotherapy

一名患有功能性大便失禁的老婦的假疣性丘疹和結節：冷凍療法的療效

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Pseudoverrucous papules and nodules (PPN) is a type of irritant dermatitis, usually secondary to urinary incontinence or encopresis and may mimic several infectious, inflammatory, and neoplastic disorders. Although topical barrier agents have been used, the lesions regress only after the irritating factors are removed. Herein we report a 79-year-old woman with onset of PPN due to faecal incontinence after a cerebrovascular accident. Histopathological examination of the perianal and gluteal papulonodules confirmed the diagnosis of PPN. We treated the lesions with cryotherapy together with barrier creams, topical antibiotics and antiseptics. After five sessions of cryotherapy performed 3 weeks apart, a partial response was achieved. However, due to an episode of pneumonia, treatment was interrupted for three months during which the lesions relapsed. In conclusion, treatment of PPN should involve elimination of the precipitating factors, while destructive or surgical methods may only provide temporary relief.

假疣性丘疹和結節是一種刺激性皮炎，通常是由大小便失禁問題而衍生，並常被誤以為傳染性、炎性或腫瘤性疾病。儘管使用外用皮膚屏障劑，但需去除刺激性因素後病變才能消退。本文報導了一名 79 歲女性因腦血管意外後大便失禁而出現假疣性丘疹和結節，肛門周圍和臀部的組織病理學檢查確實此病。我們用冷凍療法配以皮膚屏障藥膏、外用抗生素和消毒劑進行治療。每三週一次供五次的冷凍治療後，患處情況得到部分改善。但是由於染上肺炎，治療被迫中斷了三個月，在此期間患處再度惡化。終括來説，此病治療必需併除促發的因素，而破壞性或外科手術等方法僅能提供暫時的舒緩。

Keywords: Encopresis, granuloma gluteale adultorum, incontinence, peristomal skin, pseudoverrucous papules and nodules

關鍵詞：功能性大便失禁、成人臀部肉芽腫、失禁、造口周邊皮膚、假疣性丘疹和結節

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Introduction

Pseudoverrucous papules and nodules (PPN) is a type of irritant dermatitis, usually secondary to urinary incontinence or encopresis. It may mimic several infectious, inflammatory, and neoplastic disorders. Despite treatment with topical barrier agents, the lesions regress only after the irritating factors have been eliminated. Herein we report the effects of cryotherapy in an elderly patient with PPN.

Case report

A 79-year-old woman was referred to our outpatient clinic for perianal and gluteal lesions of four months duration. The past medical history included colon carcinoma treated with surgery 22 years previously, hypertension, and left hemiparesis four months earlier. She was bedridden with a chronic indwelling urinary catheter, and had faecal incontinence, and required diapers.

Dermatological examination revealed erythematous or grayish-violaceous papulonodules on the medial gluteal and perianal regions. The lesions were closely grouped and coalesced into large plaques surrounded by erythema. Some of the nodules were superficially eroded (Figure 1).

Laboratory investigations revealed mild anaemia (Hb: 11.5 g/dL, reference range: 11.9 to 14.9, Hct: 34.6%, reference range: 35.5 to 44.2), hypoproteinaemia (total protein: 6.30 gn/dL, reference range: 6.4 to 8.2, albumin 3 g/dL, reference range: 3.4 to 5), and haematuria, pyuria, nitrite positivity on urinalysis. Other blood tests including fasting blood glucose, HbA1c, creatinine, blood urea nitrogen, transaminases, electrolytes, lactate dehydrogenase, ferritin, cholesterol panel, triglyceride, calcium, phosphorous, and C-reactive protein were within normal limits. Abdominal ultrasonography was normal except meteorism, and bilateral grade I increase in echo intensity of renal parenchyma.

Histopathological examination showed prominent hyperkeratosis, parakeratosis, spongiosis, and irregular acanthosis. Koilocytic and dysplastic changes were not present. Mononuclear inflammatory infiltrate composed of lymphocytes and plasmocytes, and dilated vascular spaces scattered irregularly were present in dermis (Figure 2). PAS stain showed no fungi, and immunostaining for anti-human papillomavirus (HPV) (Clone K1H8) was negative.

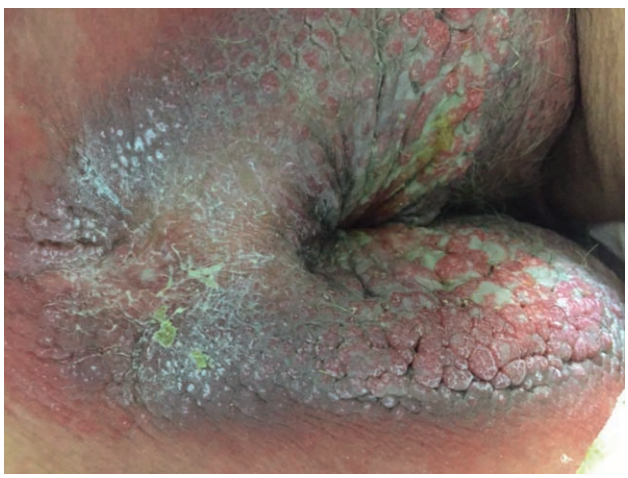

Figure 1. Perianal and gluteal erosive papulonodules forming plaques.

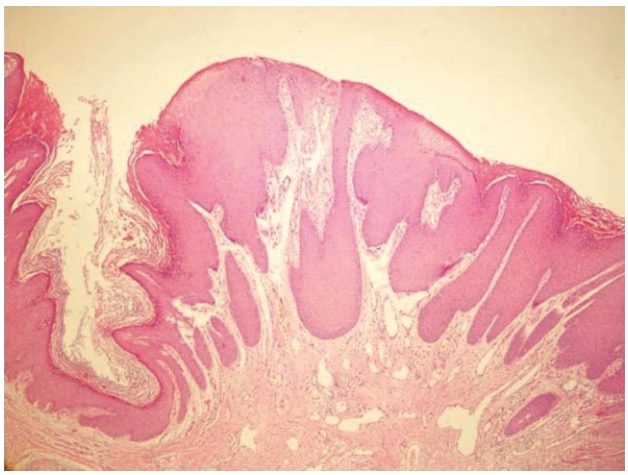

Figure 2. Hyperkeratosis, prominent acanthosis, mononuclear inflammatory infiltrate, and dilated vessels. (H&E, original magnification x40).

A diagnosis of PPN secondary to chronic irritation from faeces was made. The patient refused colostomy. After treatment with five sessions of cryotherapy performed three weeks apart, in addition to zinc oxyde ointment, topical antibiotics, and antiseptics, a partial response was achieved (Figure 3). The treatment was then interrupted as the patient was hospitalised for pneumonia. During this period, topical treatment was also not properly applied. Three months after her last visit, there was a relapse of some papulonodules (Figure 4).

Discussion

Pseudoverrucous papules and nodules is also known as "granuloma gluteale adultorum" (the counterpart of granuloma gluteale infantum in adults), "diaper area granuloma of the aged", "erosive papulonodular dermatosis", and "pseudoverrucous papules and nodules with urostomies and colostomies".[1] It is characterised by grayish or erythematous, verrucous papules, plaques and nodules, which may be erosive in some areas, in the genitoanal and peristomal sites.[1,2]

The most important aetiopathogenetic factor of PPN is a persistent moist environment due to repeated or continuous contact with liquid stool or urine. Persistent overhydration and the resultant maceration increases the vulnerability of the skin to irritants.[1] Occlusion due to nylon or cloth diapers, contact with detergents, starch, powder, halogenated steroids or benzocaine, *Candida* infection, and urinary infection are also suggested contributing pathogenetic factors.[3,4] PPN has been reported in association with urethral-vaginal fistula,[5] cloacal atresia,[6] colo-anal anastomosis for Hirschsprung disease,[7] urostomies and colostomies,[8] and chronic faecal incontinence secondary to occult spinal dysraphism.[2]

Our patient had no colostomy, or urostomy and urine contact was limited due to the urinary catheter. There was no evidence of *Candida* infection, and she had not been treated with topical steroids. However, she experienced frequent stool leakage especially after her past cerebrovascular accident.

In line with the diagnosis of PPN, a type of irritant contact reaction, histopathological examination showed reactive epidermal hyperplasia with marked acanthosis, altered cornification with parakeratosis, hypogranulosis, and pale keratinocytes in the epidermis.

In the differential diagnosis, several dermatoses, infections and neoplasias may be considered

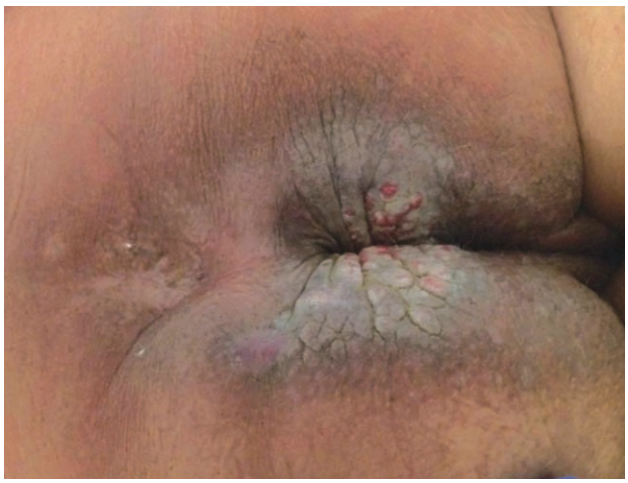

Figure 3. After treatment, the area of involvement was decreased and the lesions were flattened.

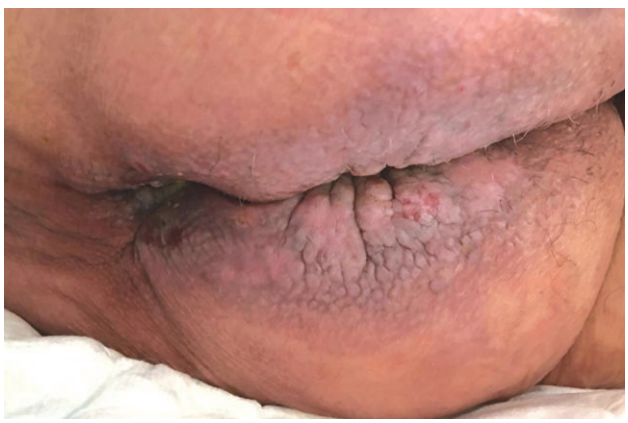

Figure 4. Regrowth of the lesions after 3 months of treatment interval.

including cutaneous lymphoma, cutaneous metastasis, Kaposi sarcoma, histiocytosis, lymphangioma, cutaneous Crohn's disease, pemphigus vegetans, halogenodermas, candidiasis, deep fungal infections, syphilis, tuberculosis, condyloma accuminata, scabietic nodules, and foreign body granuloma.[5,6,8] The clinical appearance may mimic HPV infection when aggregated papules and plaques are found on anogenital skin, thus causing concern.[2]

The most important principle of PPN treatment is to avoid or eliminate skin irritation. In this context, super-absorbent diapers and barrier topical agents are the mainstay of management.[1,2,4] In a paraplegic case with incapacitating PPN, shave excision of the lesions have been effective.[9] Likewise, in our case repeated cryotherapy sessions had additive effects on regression of the lesions. However, this effect was temporary, with relatively rapid regrowth of the lesions after cessation of cryotherapy sessions.

PPN has been mainly reported in children in the diaper area and around stomas, adult cases being relatively rare. However, PPN affecting adult patients may be encountered more frequently in near future, since the elderly population is growing, and incidence of organ cancers necessitating colostomies or urostomies are increasing. Recognition of this entity is important to avoid unnecessary investigations and treatments. Treatment should be directed to eliminating the precipitating factors and destructive or surgical methods may only provide temporary relief.

References

1. Lee YY, Ko JH, Shih YC. Multiple erythematous erosive papules and nodules on the perianal area of an 84-year-old bedridden woman. Dermatologica Sinica 2012;30:115-6.
2. Dandale A, Dhurat R, Ghate S. Perianal pseudoverrucous papules and nodules. Indian J Sex Transm Dis AIDS 2013;34:44-6.
3. Robson KJ, Maughan JA, Purcell SD, Petersen MJ, Haefner HK, Lowe L. Erosive papulonodular dermatosis associated with topical benzocaine: a report of two cases and evidence that granuloma gluteale, pseudoverrucous papules, and Jacquet's erosive dermatitis are a disease spectrum. J Am Acad Dermatol 2006;55(5 Suppl):74-80.
4. Isogai R, Yamada H. Factors involved in the development of diaper-area granuloma of the aged. J Dermatol 2013;40:1038-41.
5. Garrido-Ruiz MC, Rosales B, Luis Rodríguez-Peralto J. Vulvar pseudoverrucous papules and nodules secondary to a urethral-vaginal fistula. Am J Dermatopathol 2011;33:410-2.
6. Dixit S, Scurry JP, Fischer G. A vesicular variant of pseudoverrucous papules and nodules in the genital area of an incontinent 4-year-old. Australas J Dermatol 2013;54:e92-4.
7. Rodríguez Cano L, García-Patos Briones V, Pedragosa Jové R, Castells Rodellas A. Perianal pseudoverrucous papules and nodules after surgery for Hirschsprung disease. J Pediatr 1994;125:914-6.
8. Douri T, Shawaf AZ. Letter: Pseudoverrucous papules and nodules: a case report. Dermatol Online J 2012; 18:14.
9. Singh MK, Wendelschafer-Crabb G, Davis MD. Incapacitating pseudoverrucous papules and nodules: cure by shave excision. Cutis 2013;92:7-9.