

Inverted Presentation: Anal Bleeding as the Initial Manifestation of Pediatric Inverse Psoriasis: A Case Report

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Abstract

Psoriasis represents a chronic, immune-mediated dermatologic condition characterized by the aberrant hyperproliferation of the epidermal layer. Epidemiological data indicate a rising prevalence, currently impacting approximately 1% of the paediatric population. In this case report, we detail the presentation of a previously healthy 3.5-year-old girl who presented with a 2-month history of fresh, perianal bleeding with no other systemic manifestations. The Initial colonoscopic assessment revealed an intact colonic mucosa with no signs of inflammation and no colonic polyps were noted. However, two fresh perianal fissures were noted at that time. Several weeks later, the patient developed psoriasiform eruptions localized to the cervical, postauricular, axillary, umbilical, and perineal regions, leading to a diagnosis of inverse psoriasis and plaque psoriasis. The patient responded well to the topical tacrolimus as a therapeutic regimen, resulting in the resolution of anorectal bleeding. This case highlights an exceedingly rare clinical presentation: inverse psoriasis with concurrent anal involvement leading to perianal bleeding as the initial manifestation in a paediatric patient. To our knowledge, this is the first documented case in the literature. Our report underscores the critical need for heightened diagnostic suspicion in patients presenting with such unique clinical features.

Keywords: Anal bleeding, Inverse Psoriasis, Children.

Introduction

Psoriasis represents a chronic, immune-mediated dermatologic condition characterized by the aberrant hyperproliferation of the epidermal layer. Epidemiological data indicate a rising prevalence, currently impacting approximately 1% of the paediatric population. This disorder exhibits no age specificity in paediatric patients, demonstrating a female predominance, with severe phenotypes often correlated with early disease onset.¹

The disorder encompasses several clinical variants, including but not limited to plaque, guttate, erythrodermic, pustular, and inverse psoriasis. Inverse psoriasis specifically targets body folds and intertriginous zones—namely the axillae, perianal region, umbilical, intergluteal crevice, genital areas, and retroauricular folds²

Case Report

A previously healthy 3.5-year-old girl presented to our gastroenterology clinic with a 2-month history of fresh perianal bleeding. She passes soft stools twice a day with no history of tenesmus. The stools are covered with a small to moderate amount of fresh blood. Occasionally, some fresh blood was seen in the toilet bowl. At the time,

she has no history of joint pain/ swelling, fever, or skin lesions. She had a good appetite with no weight loss. Her initial examination revealed a well-grown child with weight and height at the 50th percentile. There was no pallor, no clubbing, or skin lesions. Her abdominal examination was unremarkable. Comprehensive hematologic and coagulative panels returned within normal parameters, as did hepatic enzyme assays and markers of inflammation Table 1. Colonoscopic assessment revealed an intact colonic mucosa with an absence of inflammatory, ulcerative, or polypoid lesions. However, the perianal examination revealed two fresh external perianal fissures which were the cause of the patient perianal bleeding.

Following discharge with an advised regimen of fecal softeners, the patient's anorectal bleeding persisted. Upon subsequent evaluation one month later, the patient demonstrated a four-day prodrome of psoriasiform eruptions localized to the cervical [Figure 1], postauricular, axillary, umbilical, and perineal regions. [Figure 2]. Microbiological cultures from these sites yielded polymicrobial flora.

Table 1: The patient's blood tests at the diagnosis.

Blood test	Result	Reference range
Hb g/dL	13	11.5 - 15.5
WBC 10 ⁹ /L	11.7	4.5 - 14.5
Platelets 10 ⁹ /L	328	150 - 450
Prothrombin Time (s)	11.1	9.9 - 11.5
International normalized ratio (INR)	1.02	0.9 - 1.1
Activated Partial Thromboplastin Time (s)	28	24.3 - 35.9
Gamma Glutamyl Transferase U/L	9	<87
Alanine Aminotransferase U/L	10	0-33
Aspartate Aminotransferase U/L	30	0-33
Bilirubin umol/L	3	0 - 17
CRP mg/L	1	0-5
ANA	1/320 (Speckled pattern)	
Anti-ds DNA IU/ml	1	0 - 9
ENA	Negative	
Immunoglobulin G g/L	10	4.5 - 9.2
Stool microscopy and culture	Negative	
Stool viruses	Negative	
Stool parasite	Negative	
Anti-Streptolysin O Test	Negative	



Figure 1: Guttate psoriasis eruption over the neck and chin.



Figure 2: Inverse psoriasis in the perianal area with multiple anal fissures.

Management strategy was revised to target plaque and inverse psoriasis, initiating a course of topical tacrolimus for inverse psoriasis and mometasone furoate ointment 0.1% for the plaque psoriasis in the trunk. This therapeutic regimen facilitated a marked improvement in dermatological symptoms. Follow-up at two months post-initiation of therapy confirmed the resolution of anorectal bleeding.

Discussion

Diagnosis of Inverse psoriasis predominantly relies on clinical examination,^{2,3} with inverse psoriasis affecting 3-7% of psoriatic patients. Inverse psoriasis poses a diagnostic challenge as it shares clinical similarities with other skin conditions affecting skin folds, including mechanical intertrigo, fungal and bacterial infections, and contact dermatitis. It may present as an isolated condition or concurrently with plaque psoriasis, as observed in the case described.³ Inverse psoriasis is distinguished by well-defined erythematous plaques that notably lack the typical scaling seen in plaque psoriasis. In contrast, the lesions in inverse psoriasis exhibit a smooth, shiny surface with minimal to no whitish scales. This difference in presentation can pose challenges in diagnosis, as it deviates from the more recognizable features of plaque psoriasis.⁴ In inverse psoriasis, superficial erosions and maceration are commonly observed, often resulting in pronounced pruritus, discomfort from perspiration, and tenderness.⁵ The extension of such lesions to the anal orifice was observed in our patient, leading to perianal fissures and subsequently anal bleeding and a delayed diagnosis due to the initial presentation focusing on anal involvement without other dermatologic signs.

Management strategies for inverse psoriasis are diverse and tailored to the severity of the disease, encompassing a spectrum from topical therapies to systemic interventions. Topical corticosteroids have traditionally been the mainstay treatment.⁵ However, due to their potential to induce skin atrophy, especially in the delicate and thin-skinned areas affected by inverse psoriasis, such as the groin region, topical calcineurin inhibitors (TCIs) have emerged as a preferable alternative, especially for long-term treatment and maintenance therapy. Recent evidence highlights the effectiveness of TCIs, such as tacrolimus ointment (0.03%-0.1%), in managing psoriasis involving facial, genital, and intertriginous regions.⁶ Tacrolimus achieves its therapeutic effect by inhibiting the activity of the nuclear factor of activated T cells (NFAT), thereby suppressing the transcription of interleukins IL-2, IL-4, and IL-10.⁶ Importantly, TCIs carry a reduced risk of skin atrophy compared to corticosteroids, as they do not interfere with collagen synthesis.⁷ However, it is important to note that the application of TCIs may still result in adverse effects, particularly in sensitive areas like the groin, which can include mild pruritus and localized burning sensations.

Learning Points:

1. Psoriasis encompasses several clinical variants in paediatric age group including plaque, guttate, erythrodermic, pustular, and inverse psoriasis.
2. Inverse psoriasis poses a diagnostic challenge, and it is distinguished by well-defined erythematous plaques that lack the typical scaling seen in plaque psoriasis.
3. Inverse psoriasis with anal involvement leading to perianal bleeding is a rare clinical presentation, particularly as an initial manifestation in children.

Conclusion

Inverse psoriasis with concurrent anal involvement leading to perianal bleeding represents an exceedingly rare clinical presentation, particularly as an initial manifestation in the paediatric population, with no prior reports documented in the literature. This case underscores the critical need for a heightened diagnostic suspicion in patients presenting with such unique clinical features. Furthermore, it emphasizes the pivotal role of a multidisciplinary healthcare team in the management of patients exhibiting atypical and rare presentations, ensuring a comprehensive and coordinated approach to diagnosis and treatment.

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