

## HEMATOHIDROSIS-LIKE SYMPTOMS OF SKIN-PICKING DISORDER

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### Abstract

Hematohidrosis, also known as hematidrosis, is a rare condition characterized by the presence of blood in sweat, with an unknown etiology. Although pathophysiology is poorly understood, psychological stress is undoubtedly linked to the condition. The diagnosis of hematohidrosis is complex, and it is only after bleeding disorders, vasculitis, trauma, and other disorders are ruled out. We describe a 12-year-old girl with a history of spontaneous bleeding on all fingernail folds. The patient and her mother denied trauma, picking, and provoking situations. The bleeding on all fingernail folds even occurred at the hospital. However, histopathology supported the diagnosis of hematohidrosis-like symptoms from skin-picking disorder. This case demonstrates that unusual bleeding on the fingernail folds can be associated with skin-picking or self-induced nail disorders. Careful history-taking and a thorough physical examination are essential to avoid unnecessary skin biopsies.

**Keywords:** hematohidrosis, hematidrosis, bloody sweat, skin picking, self-induced nail disorders, body-focused repetitive behavior

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## Introduction

Hematohidrosis, also known as hematidrosis or hemidrosis, is a rare condition characterized by the spontaneous release of blood from the eccrine sweat glands without any apparent trauma.<sup>(1)</sup> The etiology of hematohidrosis is still unknown; however, psychological stress is associated with this condition. The diagnosis of hematohidrosis is complex and should be excluded from bleeding disorders, self-inflicted lesions, vasculitis, and other disorders. There are case reports of bleeding from many sites, such as the skin, eyes, and ears, called hematohidrosis, hemolacria, and blood otorrhea.<sup>(1, 2)</sup>

## Clinical presentation

A 12-year-old American girl presented with a one-week history of bleeding on several fingernail folds. Her mother described that the bleeding started from the lateral nail folds when she was at home. The episodes occurred several times a day, without any apparent provoking factors, such as heat, emotions, stress, or menstruation. Her underlying diseases were attention deficit disorder, anxiety, and juvenile rheumatoid arthritis, and she had been on methylphenidate and sertraline for a year. During the hospital visit, the bleeding occurred on the fingernail folds. Cutaneous examination revealed paronychia, ragged cuticles, and an irregular nail surface with fresh bleeding on the lateral fingernail folds (**Figures 1 and 2**). Blood tests for complete blood count, blood urea nitrogen, creatinine, liver function tests, thyroid function tests, and basic coagulation tests were normal.

A skin biopsy taken from the bleeding site displayed superficially eroded epidermis with hyperkeratosis and crust. There was epidermal spongiosis, acanthosis, and parakeratosis, with lymphocyte exocytosis, including a lymphocytic infiltration in the superficial dermis (**Figure 3**, H&E  $\times 20$ ). There was neither evidence of vasculitis nor thrombosis of blood vessels. The overall findings were consistent with skin-picking disorder. We advised behavioral management using habit-reversal training (HRT), which included awareness training, competing responses, stimulus control, relaxation, and social support. A referral was also made to her psychiatrist for continued cognitive behavioral therapy (CBT) sessions.

## Discussion

Hematohidrosis is a rare condition with a clinical history of sweaty, bloody secretion through intact skin or sweat gland orifices without a clear pathological cause.<sup>(1)</sup> Possible pathophysiological mechanisms of hematohidrosis suggest that an increase in vascular pressure affects diapedesis into the duct of sweat glands, leading to dermal vessel vasculitis and activation of the sympathetic nervous system.<sup>(3)</sup> As a result, the periglandular vessels constrict and expand, allowing the blood cells to pass into the duct and causing hematohidrosis.<sup>(3)</sup> Various causative factors have been proposed, such as systemic diseases, vicarious menstruation, excessive exertion, psychogenic, and unknown causes.<sup>(4)</sup>

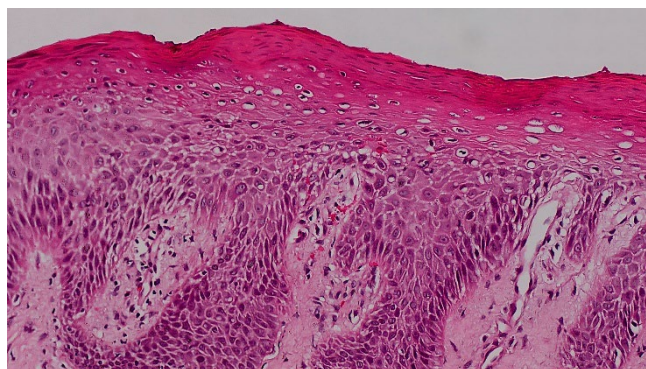


**Figure 1**



**Figure 2**

**Figures 1 and 2.** Multiple fresh blood bleeding with a blood clot on the nail folds



**Figure 3.** The epidermis shows epidermal spongiosis, acanthosis, and parakeratosis. Necrotic keratinocytes and interface changes are not observed. (H&E, magnification 20X)

Hematohidrosis is commonly diagnosed based on a patient's history and clinical presentation. Bleeding from facial sites, including around the eyes, ears, nose, umbilicus, trunk, and extremities, has also been reported.<sup>(1)</sup> Since the diagnosis of hematohidrosis relies on exclusion, history and physical examination are helpful to rule out other conditions such as trauma, infection, and bleeding disorders. To date, a few reported cases in the literature have shown inconsistent findings in histopathology.<sup>(5)</sup>

Diagnosis was challenging, as the patient and her guardian insisted that the bleeding occurred spontaneously, without any trauma or picking on her fingers, which initially mimicked hematohidrosis. The presence of hemorrhagic crusts further obscured the underlying nail findings. Self-induced nail disorders (SINDs), a subtype of skin-picking disorders within the body-focused repetitive behavior (BFRB) spectrum, typically present with nail surface irregularities, periungual disruptions, ragged cuticles, onychophagia, or peeled nail polish.<sup>(6, 7)</sup> To date, no previous reports have described SINDs manifesting with periungual bleeding resembling hematohidrosis. In this patient, the presence of paronychia, ragged cuticles, an irregular nail surface, and granular parakeratosis on histopathological examination supported the diagnosis of a self-inflicted lesion mimicking hematohidrosis. In contrast, true hematohidrosis typically exhibits a normal epidermis or dermal blood-filled spaces with red blood cell extravasation, but not granular parakeratosis.<sup>(5, 8)</sup> The coexistence of attention deficit disorder and anxiety further supported a psy-

chogenic origin, as recognized risk factors for BFRB.<sup>(7, 9)</sup>

Behavioral therapy plays an essential role in managing skin-picking disorders. HRT, a core component of CBT, increases awareness of triggers and replaces maladaptive behaviors with competing responses.<sup>(7)</sup> Previous studies have reported improvement with CBT-based interventions, particularly when combined with glutamate-modulating agents.<sup>(6, 7)</sup> Preventive strategies such as applying gloves, band-aids, or adhesive tapes to areas prone to picking may also be beneficial.<sup>(6)</sup> In this case, HRT was advised, and the patient was referred for formal CBT sessions under psychiatric supervision. Her guardian subsequently reported complete cessation of bleeding and no recurrence of symptoms.

In conclusion, we report a rare case of skin-picking disorder presenting with bleeding episodes mimicking hematohidrosis. Physicians should be aware of this condition to avoid misdiagnosis and provide appropriate reassurance to patients with similar presentations. A multidisciplinary approach that combines behavioral therapy, pharmacological intervention, and management of coexisting psychiatric conditions can help achieve optimal patient outcomes.

### Ethical consideration

The Institutional Review Board approval was not required for this case report at the Institute of Dermatology, and all identifying information has been removed to ensure anonymity. However, the patient's mother provided consent for the publication of this information.

## References

1. Holoubek JE, Holoubek AB. Blood, sweat, and fear. "A classification of hematidrosis". *J Med* 1996; 27: 115-33.
2. Norn MS. Microscopically and chemically detected haemolacria. *Acta Ophthalmol (Copenh)* 1977; 55: 132-40.
3. Uber M, Robl R, Abagge KT, Carvalho VO, Ehlke PP, Antoniuk SA, et al. Hematohidrosis: insights in the pathophysiology. *Int J Dermatol*. 2015; 54: e542-3.
4. Jerajani HR, Jaju B, Phiske MM, Lade N. Hematohidrosis - a rare clinical phenomenon. *Indian J Dermatol* 2009; 54: 290-2.
5. Wang Z, Yu Z, Su J, Cao L, Zhao X, Bai X, et al. A case of hematidrosis successfully treated with propranolol. *Am J Clin Dermatol* 2010; 11: 440-3.
6. Guldiken Dogruel G, Atis G, Esen M, Ulutas Demirbas G, Guldogan O, Demirbas A, et al. Self-Induced Nail Disorders: Clinical and Demographical Features. *Int J Dermatol* 2025; 64: 1409-15.
7. Ortiz-López LIS, G.; Chen, R.; Braun, N.; Kim, E.J.; Aihie, O.P.; Spiegel, B.R.; Meltzer, B.R.; Nambudiri, V.E. Skin-picking disorder: Risk factors, comorbidities, and treatments. *JAAD Reviews* 2025; 3: 182-9.
8. Manonukul J, Wisuthsarewong W, Chantorn R, Vongirad A, Omeapinyan P. Hematidrosis: a pathologic process or stigmata. A case report with comprehensive histopathologic and immunoperoxidase studies. *Am J Dermatopathol* 2008; 30: 135-9.
9. Twohig MP, Hayes SC, Masuda A. A preliminary investigation of acceptance and commitment therapy as a treatment for chronic skin picking. *Behav Res Ther* 2006; 44: 1513-22.