Haematidrosis in young Lass: An omen of stress

Nor Azam Kamaruzaman, MMed (Fam Med)[1], Mohd Aizuddin Abd Rahman, MMed(Fam Med)[1], Noraini Musa, MBBS[1], Iskandar Firzada Osman, MMed(Fam Med)[2]

[1]Department of Family Medicine, Kulliyyah of Medicine, International Islamic University Malaysia, , Kuantan, Pahang, Malaysia, [2]Klinik Kesihatan Jaya Gading, Kuantan, Pahang, Malaysia

SUMMARY

Haematidrosis, also known as hematohidrosis, is an unusual disorder in which healthy skin secretes blood. Scarce case reports mainly occurred in adolescent Asian girls. It is common to misdiagnose haematidrosis as a consequence of self-harm because it is often triggered by severe stress or psychiatric disorders. Early diagnosis will enable rapid treatment and intervention of the underlying diseases and stress, making it essential to understand this disease and its clinical features. We describe a case report of a 16-year-old Malay girl who presented to the clinic with a 1-month history of episodic sweating blood from her forehead and occasionally bloody tears. Specific investigation to establish the diagnosis is still a dilemma, but a more significant challenge in primary care is identifying and managing a teenage patient's stressor.

INTRODUCTION

Haematidrosis (ICD-10 2016 diagnosis code L74.8) is an eccrine sweat disorder and a rare clinical condition of sweating blood presented spontaneously from non-traumatized skin. Sweat glands have not been definitively implicated in this condition. It usually occurs when a person suffers from extreme stress, for example, being bullied by peers. A few cases of haematidrosis were reported in the literature, and none has been reported in Malaysia.[1] The existing literature is scarce and often based on clinical events; therefore, incidence and prevalence are unknown.[1,2] Most cases include bleeding from the eyes, ears, and nose, although there have also been reports of bleeding from the umbilicus, trunk, and extremities.[1] The actual cause and pathophysiology of the disease are still unknown. Haematidrosisis blood oozing out of unbroken skin in the same way as sweat does. It affects the face, ears, nose, and eyes, linked to other psychological concerns, including fear and mental stress.[1,2]

Haematidrosis remains a diagnosis of exclusion after ruling out other conditions such as bleeding disorders, self-inflicted skin lesions, chromhidrosis (another rare skin condition characterized by the secretion of yellow, blue, green, or black-coloured sweat), or pseudochromhidrosis (a condition where normal sweat becomes coloured by exogenous factors). There is no specific laboratory investigation to diagnose haematidrosis. However, in some cases, red blood cells in the secreted liquid distinguish haematidrosis from chromhidrosis and pseudochromhidrosis.

CASE REPORT

A 16-year-old Malay girl with no prior medical illness presented to a health clinic in Kuantan, Pahang, with a complaint of bleeding intermittently from her face and palm for one month, without any underlying trauma. No other areas involved in bleeding episodes such as the axilla, areola, and anogenital skin. No similar episodes were experienced by her before. She reported no visible broken skin; bleeding episodes began without warning and were unprovoked. It was not preceded with feeling of warmth or burning sensation over the skin. She also experienced between two to three daily episodes of bleeding that occurred during sleep and when awake. Each episode lasted for 3–5 minutes and was usually self-limited. The patient described an occasional tingling sensation over her forehead during the bleeding episode. The sweat was bloody in appearance and does not involve other colours such as brown, black, blue, green, or yellow. It also did not stain the skin. There was no other associated bleeding tendencies, such as gum bleeding, hematemesis, menorrhagia, bruises, or anaemia symptoms. There was no family history with bleeding disorder or similar presentation. Other aspects of her history at that stage were noted to be non-contributory as there was no history of prolonged fever, joint pain, alopecia, dye exposure, chemical product, medication, and supplementation history.

Upon examination, she appeared comfortable with no psychomotor agitation or retardation. Her vital signs were stable. She was not pale nor tachycardic. Examination over the face, scalp, eyes, and other parts of her body revealed no wound, swelling, lump, abnormal vascular lesion, skin pigmentation, or staining. Other physical examinations were unremarkable; specifically, there were no signs of self or secondary inflicted injuries (scars, scratches, or wounds), and a possible diagnosis of haematidrosis was made. Figures 1 and 2 show bleeding episodes at home which were recorded and witnessed by her parents.

Recognizing that haematidrosis could signify a hidden psychological finding, she was approached by applying CRET *(Confidentiality, Rapport, Empathy, and Trust)* throughout the consultation. An important assessment tool to engage a teenage patient was utilized. HEADSS, which consists of psychosocial assessment of *Home, Education/eating/exercise, Activities/peer relationships, Drugs/cigarette/alcohol, Sexuality, and Suicide/self-harm* revealed that this young girl was having issues at home and school. She admitted to having depressive symptoms and did not fulfil the DSM-5 criterion for major depression due to peers and parental factors. She also complained of persistent low mood in the past two months

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Corresponding Author: Noraini Musa
Email: norainibtmusa88@gmail.com;ainimusa_1988@yahoo.com

Table I: Investigations

		Normal value
Haemoglobin (g/L)	13.2	12.5–16.0
Platelet (10^9/L)	291	150-300
White cell count (10^9/L)	9.71	4.0-10.0
Differential count (10^9/L):		
Lymphocyte	2.3	1.0-4.0
Neutrophil	5.0	2.0-7.5
Peripheral smear	Normochromic normocytic red blood cell	
Prothrombin time (s)	10.3	sec.
International normalized ratio (s)	1.0	1.0-1.2
Activated partial thromboplastin (s)	28.5	25.0-35.0
ISTH SCC Bleeding score	1	<6 (female)

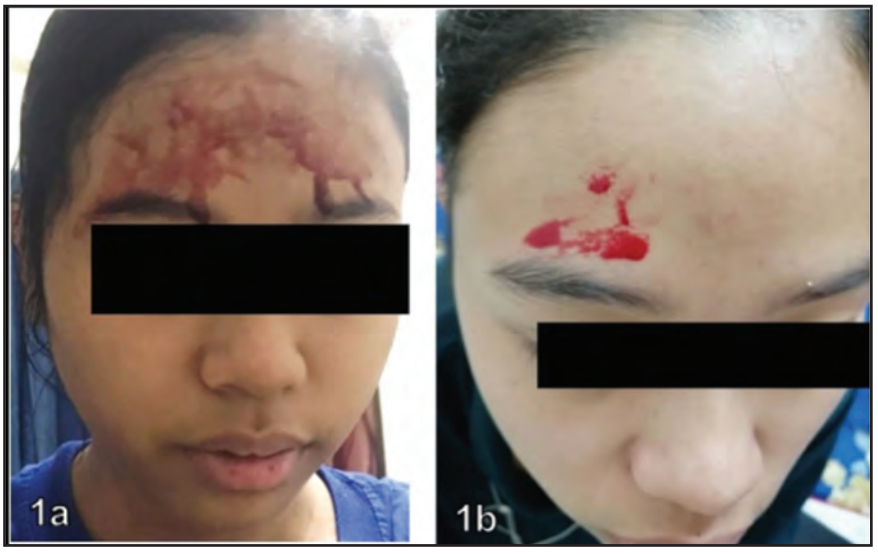

Fig. 1: (a) Bleeding sweats from the forehead and (b) no bleeding seen after wiping the forehead

Fig. 2: (a) Bleeding tears and (b) bleeding sweats from the forehead

before the bleeding episode occurred. It was associated with anhedonia (loss of interest), hopelessness, and poor sleep—otherwise, no suicidal thoughts or self-harm behaviour. The patient felt intimidated and was experiencing significant psychological stress due to peer bullying at her new school, which occasionally involved physical abuse. This problem was triggered since her family moved to Kuantan from Kuala Lumpur. She also felt that her parents were authoritarian and that they paid more attention to her other siblings.

At the clinic, she was counselled on relaxation techniques and coping skills. She was referred to Hematology Department where the diagnosis of haematidrosis was confirmed clinically. She was planned for fluid serology and skin biopsy but was not proceeded.

Her blood investigations are shown in Table I, and all results were normal.

She was also referred to psychiatry team, which diagnosed her with mild depression and was prescribed medication to help with her sleep, but her mother refused the medication. She defaulted hospital follow-up as her parents opted for alternative treatment and breathing and relaxation techniques. After 6months, her symptoms eventually resolved. Her mother claimed it was due to the alternative treatment using only healing water given by a pious man.

DISCUSSION

Haematidrosis is a rare condition in which capillary blood vessels enter the sweat gland, possibly rupturing and causing them to exude blood. It occurs under extreme physical or emotional stress and aetiology proposed by a few authors.[1,3] There are various causative factors, for instance, systemic disease, excessive exertion, psychogenic, and unknown causes.[2,4] According to a case series by Kluger et al. in 2017 for 10 years,it was revealed that only 25 cases were reported, and most patients were women (84%) with the median age in youth (13 years old) and mainly in Asia.[1] The researcher also found that forehead was the most common site of bleeding (40% in cases), and possible triggering factors were identified in 56% of the cases; most of these (86%) were stress, and others were platelet dysfunction and epilepsy.[1] Our case report has similar characteristics as the majority of other cases reported.

Treatment of haematidrosis depends on the aetiology. In a recent case series, few patients were treated with beta-blockers, anxiolytic medications, and antidepressants.[2,5] About 50% of the patients were treated with beta-blockers, and the treatment was effective 94% (17/18) of the time in reducing or resolving symptoms.[2,6] Psychological therapy, counselling, and relaxation techniques are all included in the treatment plan.[1,2,6] Psychotherapy primarily involved relaxation techniques, cognitive behavioural therapy and parental education to reduce stress. Referral to the haematology team was also done to identify possible underlying haematological disorder(s). As part of the natural history of this condition, the symptoms of haematidrosis usually resolve when the causal agent is removed. In this case, the remission occurred spontaneously without medical therapy. There is a misconception by parents that the disease had been cured due to taking the healing water. Therefore, it is the role of the primary care physician to correct the misconception and re-educate the patient and the family.

Shafique et al., 2021, proposed an algorithm for the evaluation and management of patients with potential haematidrosis.2 Without an actual laboratory test, it is crucial to rule out bleeding diseases or connective tissue illnesses in which vascular fragility might cause bleeding. According to the proposed algorithm, haematidrosis remains a diagnosis of exclusion while investigating patients with suspected haematidrosis.[2] Further examination, such as the platelet function test, could not be done in this case because the mother opted for alternative treatment with conventional care.

Knowing the aetiology of psychosocial stressors requires the HEADSS framework as an integral part of history, it is relevant when the psychosocial assessment of a teenage patient is a concern. Approaching via CRET and HEADSS, besides psychosocial assessment and as an engagement tool, stressor(s) (negative factors) and positive factor(s) could also be identified. Similarly, HEADSS is used to assess the teenager's progress during follow-up. The psychiatric referral was done as a shared care mainly to identify undetected underlying significant psychiatric issue(s). Mild depression can be managed in primary care, collaborating with occupational therapists and counsellors.

CONCLUSION

This case highlights the rarity of the condition and the dilemma in diagnosis as no gold standard investigation is available to confirm the diagnosis of haematidrosis. It is an interesting bleeding phenomenon where a psychological trigger (rivalry, bullying, punishment) leads to a sequence of events culminating in bleeding from intact skin. Referral to other related departments must be arranged to exclude other conditions to confirm the diagnosis. CRET and HEADSSS frameworks were used to engage and explore her psychosocial state, and they revealed mild depression precipitated by peers' bullying and family conflict. Non-pharmacological therapy (relaxation technique, coping skills, supportive counselling) was rightfully instituted at the primary care level, and psychiatry input was also sought. HEADSS approach was able to identify the stressor, and eventually, health care personnel will be able to alleviate the stressor by focusing on the area involved through an appropriate solution given. Therefore, HEADSS is the right tool for facilitating clinical management in a case of haematidrosis in adolescents in line with the detailed investigation to rule out other causes of bleeding.

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CONFLICT OF INTEREST

None to declare.

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