Case Report

An Interesting Case Report of Hematohidrosis

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ABSTRACT

Hematohidrosis or hematidrosis is a rare condition in which a human being sweats blood. Psychogenic cause is found to be the most frequent cause among other causes such as systemic disease and vicarious menstruation. This is a case report of a 10-year-old girl with oozing of blood from intact skin of scalp. Underlying intense fear secondary to psychosocial stressor was identified and a provisional diagnosis of mixed anxiety and depressive disorder was made. Pharmacotherapy and psychotherapy were followed by complete remission. It was inferred from this experience that hematohidrosis is a treatable condition if the underlying cause is correctly identified.

Key words: *Blood sweat, hematidrosis, hematohidrosis*

INTRODUCTION

Hematohidrosis is a disorder in which a person sweats blood. Historically, this condition was reported in a soldier under extreme stress by Da Vinci and also in Jesus Christ at the time of crucifixion. Causes can be systemic disorders, bleeding disorders, vicarious menstruation, excess exertion, and psychological stressors.[1] The presence of underlying bleeding disorders is called true hematohidrosis.[2] Treatment of the underlying etiology partly helps in the remission of symptom. However, even in those cases with systemic etiology, psychological stressors act as a precipitating factor for bleeding. There are case reports of bleeding from skin, bleeding from eyes[3] and ears[4] called hematohidrosis, hemolacria, and blood otorrhea, respectively.

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CASE REPORT

A 10-year-old girl was brought to the Department of Psychiatry with complaint of oozing of blood from the intact skin of scalp for the past 1 week. First episode of bleeding started following the incident when she fought with a co-student in school and was punished by making her stand outside the class for an hour and was threatened to inform her parents about her behavior. Child stood outside the classroom and cried for an hour. Her teacher noticed bleeding from her scalp after about half an hour and informed her parents. Meanwhile, the teacher looked for any physical trauma at the bleeding site but none was found.

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Since then, the bleeding occurred about once or twice a day, lasted for about 3–5 min, from any part of the scalp. No associated pain was present. No history of bleeding from any other site, drug intake, or hair plucking was present. No bleeding disorder or any skin infection was found. History of bed wetting at night for past 2 years about once or twice a week, almost daily during exam time and when scolded by parents. She had a previous period of continence for 5 years before the nocturnal enuresis.

Family milieu patient was fearful of her father since childhood. He would scold her frequently, comparing her academic performances with her younger sibling. Mother would also scold and punish her physically for the same reason almost every month during exam results.

When examined, the child was alert, oriented, comprehends, and communicates relevantly. No psychotic symptoms were elicited. The child was euthymic and reactive. Her intelligence was within normal limits. When enquired about her school and scholastic performance, child's affect changed immediately. She became anxious and expressed fear about her academic performance. Child reported that she was often punished for her academic performances. Punishment was usually as a result of comparison of her performance with that of her younger sibling who scores 99% while she scores 90–95%. Child expressed that she regrets coming home with exam results, cries on and off at night when alone both fearful of the punishment and also about being compared with her sibling. Analysis of stress with Response to Stress Questionnaire-Child/Adolescent version showed that the child was definitely stressed.

Provisionally, the child was diagnosed as mixed anxiety and depressive disorder. She was started on tablet imipramine and clonazepam, reassured and advised to come after a week for review with her mother and father. During the next visit, the child was seated beside her parents and interviewed. She started elaborating that she was punished physically the day before by her father for scoring 85% in mathematics when suddenly a red-colored secretion was noted oozing from her scalpas shown in Figure 1. It was sent for biochemical examination which tested positive for bloodwith no other abnormalities as shown in Table 1. Skin underneath the bleeding site was normal as shown in Figures 2 and 3, no cuts, abrasions, or tenderness was present. Bleeding stopped by itself in about a minute.

Parent management training and psychoeducation for parents regarding the disease and the etiological role of stress were informed. Parents were taught about positive and negative reinforcement techniques and their advantages over punishment. Child was taught relaxation exercises and pharmacotherapy was continued. Bleeding gradually reduced in frequency and stopped completely after 4 months. Child was followed up for the next 1 year during which she was in complete remission.

Table 1: Investigations

Hemoglobin (g/dl)	11.4
Total leukocyte count (cells/dl)	8000
Differential count (%)	
Polymorph cells	80
Lymphocytes	20
Platelet (Lac/dl)	3.2
Peripheral smear	Normocytic normochromic red blood cell
Computed tomography brain	Normal
Scalp skin biopsy	Normal
Benzidine test of oozed blood	Positive
Prothrombin time (s)	13
International normalized ratio (s)	1.16
Activated partial thromboplastin (s)	31.9
Bleeding time (s)	2.40
Clotting time (s)	5.25

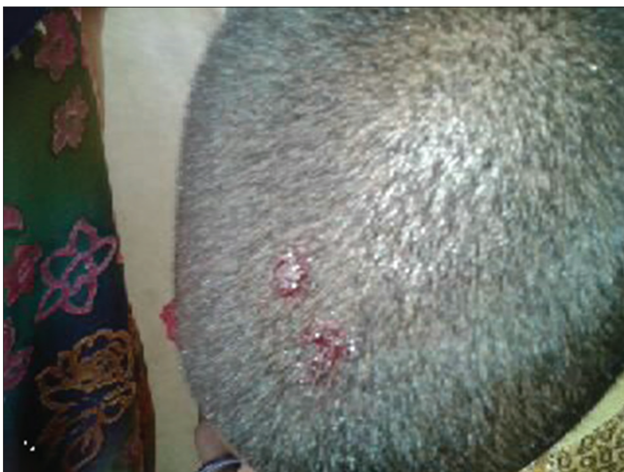

Figure 1: At the time of bleeding

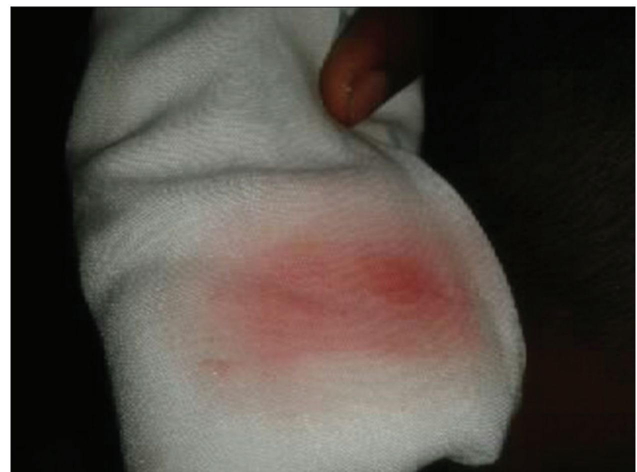

Figure 2: Wiped bleeding

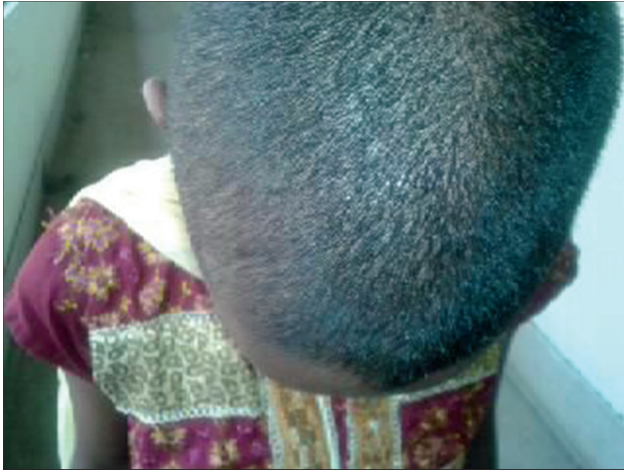

Figure 3: Intact skin underneath the site of bleeding

DISCUSSION

The etiopathogenesis proposed by few authors is that blood vessels around the sweat glands constrict under stress.[5] As the anxiety increases, the blood vessels rupture. The blood extravasates into the sweat glands presenting as droplets of blood mixed with sweat. The extravasated blood has identical cell components as that of peripheral blood.[6] The severe mental anxiety activates the sympathetic nervous system to invoke the fight or flight reaction to such a degree as to cause rupture of the blood vessels around the sweat glands. A distinctive type of vasculitis is also proposed to be a pathologic mechanism underlying the condition.[7] In this child, no underlying systemic disease was found, skin biopsy was normal. Intense fear about her scholastic performance and sibling rivalry added to her mental stress which presented as spontaneous bleeding. Remission was achieved with pharmacotherapy, supportive psychotherapy, family education, and better child rearing practices.

CONCLUSION

Stress is an important contributory factor which manifests in different forms both physically and psychologically. Especially in children apart from causing distress immediately, it also acts as an important epigenetic factor. Successful treatment of this condition with beta blockers,[8] anxiolytics,[9] and antidepressants[10] are present in the literature.

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Conflicts of interest

There are no conflicts of interest.

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