

Striae distensae - like lesions

A cause of scarring alopecia among children

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ABSTRACT

Objectives: Although alopecia areata is a common problem among children, many misdiagnoses for this condition can happen. The aim of this study was to demonstrate the striae distensae as lesions that cause scarring alopecia with a great resemblance to alopecia areata.

Methods: A total of 36 children with provisional diagnosis of alopecia areata of the scalp were assessed clinically in the Department of Dermatology and Venereology, Baghdad Teaching Hospital, Baghdad, Iraq, between June 1998 to June 2001. Their age ranged from 3–12 years and the mean \pm standard deviation (SD) was 7.30 ± 2.59 years with equal sex ratio.

Results: All patients provided for this study had a history of patchy hair loss of few months duration. Their

parents denied any history of obvious trauma and many modalities of treatment had been tried without benefit. The clinical examination revealed single or multiple (1-6) (mean \pm SD 2.41 ± 1.22) complete linear hair loss patches resembling atrophic scar that was similar to striae distensae. The histopathological examination showed atrophy of the epidermis, full replacement of the dermis by collagen bundles, and complete loss of appendages.

Conclusion: This is a new entity, which seems to be common among children and often confused with untreated cases of alopecia areata. This condition should be added to the differential diagnosis of patchy hair loss in children and the parents should be reassured of the cause of hair loss and no treatment therapy needed.

Saudi Med J 2002; Vol. 23 (12): 1489-1491

Alopecia areata is a common cause of patchy hair loss in children.¹⁻³ Other causes such as tinea capitis, trichotillomania and boils might cause patchy hair loss.^{1,3-5} Clinically, they can be easily diagnosed.^{2,3,5,6} In recent years, we came across a condition that is often misdiagnosed and treated as alopecia areata but on the examination it looked like scar such as lesions. The aim of the present work is to evaluate this problem among children.

Methods. Thirty-six children were referred with provisional diagnosis of alopecia areata of the scalp

to the Department of Dermatology and Venereology, Baghdad Teaching Hospital, Baghdad, Iraq, between June 1998 to June 2001. A detailed history was taken from their parents regarding family history of similar conditions, associated with medical illnesses, drug history, scalp infections, surgical history and history of trauma to the scalp. Full physical examination of the patches of hair loss was carried out including site, size, shape and surrounding area. Four mm punch biopsies were performed on 2 patients for histopathological examination.

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Received 2nd April 2002. Accepted for publication in final form 15th July 2002.

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Table 1 - The frequency distribution of the cases of striae distensae-like lesions according to the site of involvement.

Site	n (%)
Side of scalp*	14 (38.9)
Occiput	9 (25)
Crown*	8 (22.2)
Vertex*	11 (30.6)
Total	36 (100)

*patients with 2 sites, n - number

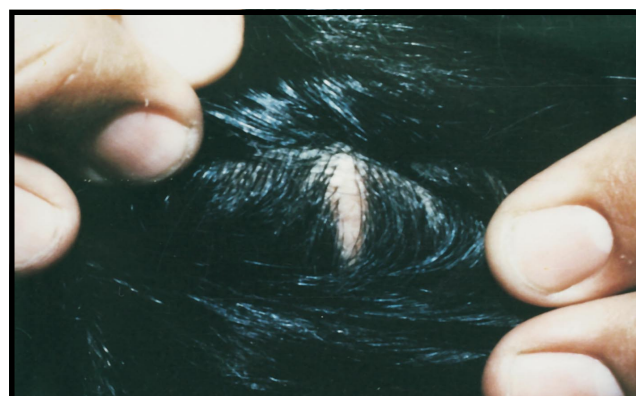


Figure 1 - Striae distensae like lesion on the scalp of an 8-year-old boy.

Table 2 - Clinical information of the examined group of children.

Clinical criteria	Range	Mean	SD
n of lesions	1 - 6	2.41	1.22
Length in cm	1 - 3	1.78	0.7
Width in cm	0.5 - 1	0.76	0.2

n - number, SD - standard deviation

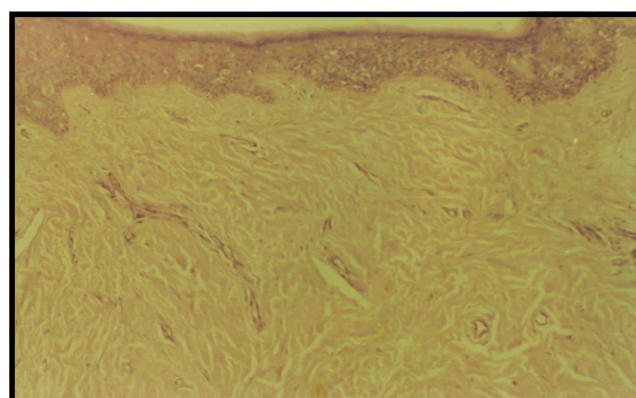


Figure 1 - Light macroscopic features of striae distensae like lesion showing scarring of the dermis. (Hematoxylin & Eosin stain x 200).

Results. All 36 patients had a history of patchy hair loss of 1-17 month's duration with a mean \pm standard deviation (SD) of 9.22 ± 3.91 months. Their ages range from 3-12 years, mean \pm SD was 7.30 ± 2.59 years and both sexes are equally affected. The parents denied that they have a family history of the same condition, but 4 of the examined cases were brothers from 2 different families. Also, there was no history of trauma to the scalp, associated medical illnesses and scalp infections. Many modalities of treatment had been tried without response including topical and systemic steroid and other remedies. The site of involvement is shown in **Table 1**. The clinical examination revealed a single or multiple linear hair loss patches (1-6 lesions) with mean \pm SD of 2.41 ± 1.22 resembling atrophic scars, slightly reddish in color which is similar to striae distensae (atrophicans), completely free of hair without broken hairs and and exclamation marks at the margin of the patches (**Figure 1**). The size of the patches was varied from 1-3 cm in length and the width usually ranged from 0.5-1 cm (**Table 2**). Full examination of the whole skin showed no striae distensae in all patients.

The histopathological findings showed similarity to the histopathology of striae distensae, which is like a scar.^{6-8,9} Showing atrophy of the epidermis,¹⁰⁻¹¹ with decrease in the thickness of the dermis and full replacement of the dermis by straight, thin, eosinophilic collagen bundles which arrange parallel to the skin surface and complete loss of appendages (**Figure 2**).^{6-8,10,11}

Discussion. Although, alopecia areata is a common disease among children,¹⁻³ many misdiagnoses of this condition could occur. This study had been demonstrated that striae distensae such as lesions were common problem among children, often diagnosed and treated as alopecia areata. However, there is no history of recent trauma to the affected scalp of the child; nevertheless, the presence of scar should raise the suspicion of blunt trauma to the scalp without inducing obvious injury.^{12,13,14} The blunt trauma might cause sudden stretch to the skin causing damage to a rigid cross-linked collagen^{6,12,13,15} and rupture of the dermal

tissue without obvious injury to the epidermis similar to the pathogenesis of striae distensae. In addition, the histopathological pictures mimic striae distensae.^{6,7,12,13}

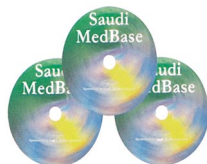
In conclusion, we are describing a new entity that seems to be common among children and often confused with alopecia areata. This condition should be added to the differential diagnosis of linear patchy hair loss in children. Their parents should be reassured of the cause of hair loss and there is no therapy needed.

References

1. Al-Fatlawi HS, Al-Waiz MM. Hair loss among Iraqi children. *Journal of Faculty of Medicine Baghdad* 2000; 42: 614-618.
2. Hoss DM, Grant Kels JM. Diagnosis: Alopecia areata or not? *Semin Cutan Med Surg* 1999; 18: 84-90.
3. Sperling LC, Mezebish DS. Hair disease. *Med Clin North Am* 1998; 5: 1155-1169.
4. Al-Waiz MM, Al-Shahwani F, Al-Rawi F. Scarring alopecia in Iraqi patients. *Iraqi Journal of Community Medicine* 2001; 14: 210-213.
5. Odom RB, James WD, Berger TG. Pruritis and Neurocutaneous dermatoses. In: Odom RB, James WD, Berger TG, editors. *Andrew's Disease of the skin: Clinical dermatology*. 9th ed. Philadelphia (PA): WB Saunders Company; 2000. p. 49-68.
6. Habif TP. Hair disease. In: Habif TP, editor. *Clinical Dermatology: A color guide to diagnosis and therapy*. Philadelphia (PA): Mosby Year Book Inc; 1996. p. 739-757.
7. Burton JL, Lovell CR. Disorder of connective tissue. In: Champion RH, Burton JL, Burns DA, Breathnach SM, editors. *Textbook of Dermatology*. 6th ed. Oxford: Blackwell Sciences Ltd; 1998. p. 2003-2071.
8. Zheng P, Lavker RM, Kligman AM. Anatomy of striae. *Br J Dermatol* 1985; 112: 185-193.
9. Watson RE, Parry EJ, Humphries JD. Fibrillin microfibrils are reduced in skin exhibiting striae distensae. *Br J Dermatol* 1998; 138: 431-437.
10. Zheng PS, Lavker RM, Lehmann P. Morphologic investigations on the rebound phenomenon after corticosteroid - induced atrophy in human skin. *J Invest Dermatol* 1984; 82: 345-352.
11. Tsuji T, Sawabe M. Elastic fiber in striae distensae. *J Cutan Pathol* 1988; 15: 215-222.
12. Sharquie KE, Abdul-Wahab SK. Striae distensae in Iraqi young male. Diploma thesis in Dermatology. Baghdad (Iraq): College of Medicine, Baghdad University; 1992.
13. Lever WF, Kever GS. *Histopathology of the skin*. 7th ed. Baltimore (MD): Lippincott Williams & Wilkins; 1990. p. 312-315.
14. Shuster S. The cause of striae distensae. *Acta Derma Venereol Suppl (Stockh)* 1979; 59: 161-169.
15. Herxheimer H. Cutaneous striae in normal boys. *Lancet* 1953; 2: 204.

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Title:

Vitamin D resistant rickets and alopecia in a Saudi child

Source:

Saudi Med J 1992 March, 2: 159-162

Abstract

A 34-month-old Saudi boy with vitamin D dependent rickets type 11 with alopecia is described. In addition to clinical features of severe rickets, the patient manifested elevated circulating 1,25-dihydroxy vitamin D [1,25-(OH)₂D₃] level, suggesting target organ resistance. There was no clinical, radiological or biochemical response to therapy with high daily doses of 1-α-D₃ (3 μg/kg/day) supplemented with 2 g of oral calcium gluconate over a period of 6 months. The daily oral calcium supplementation has now been increased to 59. A brief review of the literature on vitamin D dependent rickets type 11 with alopecia is presented.