

Case Report

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Alopecia Areata Ophiasic with Ciliary Madarosis in A Pediatric Patient: Case Report

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ABSTRACT

A 10-year-old girl presented to the dermatologist for hair and eyelash loss that began in March 2024, after grieving for the loss of her maternal grandmother. Physical examination revealed Fitzpatrick phototype IV/VI and a band-like alopecia in the temporo-occipital region, with partial madarosis on the left side. The Sabouraud sign was negative, and the traction test was positive. Trichoscopy revealed empty follicles, whiteheads, few blackheads, and vellus and regrown hairs. Onychoscopy revealed pitting in the nail plate of the fourth finger of the left hand. The trichogram showed dystrophic anagen and brush hairs at the distal end. Based on these findings, a diagnosis of infantile ophiasic alopecia areata with infantile ciliary madarosis was made. Paraclinical studies were within normal limits. The ophthalmological evaluation recommended 0.005% ophthalmic latanoprost, while the dermatologist prescribed treatment with oral corticosteroids (dexamethasone), 2% topical minoxidil, and clobetasol hair lotion. The child psychologist diagnosed post-traumatic stress disorder. After 56 days of treatment, trichoscopy revealed hair regrowth and eyelash regrowth on the left upper eyelid, demonstrating an excellent therapeutic response.

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Clinical Case Report

This is a 10-year-old female student who reports the onset of the current illness in March 2024, characterized by hair and eyelash loss. The reason for which she came to the dermatology service of the Dr. Enrique Tejera Hospital City. Psychobiological history: grief for the loss of her maternal grandmother. On physical examination, skin phototype IV / VI according to Fitzpatrick, she presents dermatosis located in the hairline of the scalp in the temporo -occipital region characterized by a band-shaped alopecia plaque (Figure 1) and partial loss of eyelashes in the left eye. (Figure 2) Negative Sabouraud sign and positive pull-out or traction sign. On evaluation, trichoscopy. Empty follicles, white dots, few black dots, one hair per follicular unit, vellus hairs and regrown hairs are observed. (Figure 3) Onychoscopy, the nail plate shows pitting on the fourth finger of the left hand. The trichogram reports: proximal end: dystrophic anagen and distal end: brush-like or frayed hairs. According to the clinical and trichoscopic findings, a definitive diagnosis of alopecia areata is made. childhood ophiasic with ciliary madarosis.



Figure 1: Alopecia band-shaped plaque



Figure 2: Eyelash Alopecia

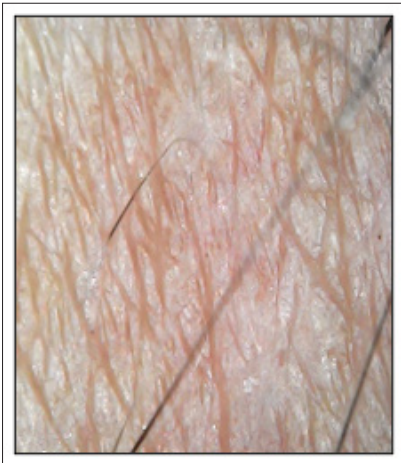


Figure 3: Vellus Hairs

Paraclinical tests within normal limits,
HGB: 12.8g/dl,
HTC: 42%,
Leu: 6.80c/mm3,
Seg: 55%,
Lin: 43%,
PLT: 364,000c/mm3,
Basal glycemia 76mg/dl,
TSH: 2,051uUI/ml,
Free T3 2.60pmol/L,
T4 1.28pmol/L.

An ophthalmology evaluation suggests the use of Latanoprost 0.005% ophthalmic without contraindications and management by dermatology. Likewise, it is evaluated by child psychology who concludes with a diagnosis of Post-traumatic Stress, under the indicators of Sadness, overwhelm, anxiety, insecurity, confusion. Associated with the current illness. Therapy was initiated with oral corticosteroids (dexamethasone: 0.1 mg/kg/day twice weekly for 8 months), prostaglandin analogues such as latanoprost 0.005% ophthalmic solution for topical use. Topical vasodilator (minoxidil 2%), high-potency corticosteroid (clobetasol 0.05% hair lotion). After 56 days of evolution, trichoscopy revealed regrowth of hair, vellus hair, and blackheads. And on the upper left eyelid, cilia are observed with eyelash regrowth. This shows an excellent response to therapy (Figure 4).

Discussion

Alopecia areata (AA) is an autoimmune disease characterized by non-scarring hair loss. It affects the scalp in 90% of cases, but can also occur in other hair-bearing areas such as the eyelashes, eyebrows, beard, and nail lesions [1,2]. Madarosis it is defined as the loss or fall of cilia from both eyelashes and eyebrows, destruction of follicles, while ciliary madarosis consists of Decrease in the number or total loss of eyelashes associated with multiple causes, one of which is AA. Madarosis has multiple etiologies, including ophthalmological conditions, keratinization disorders, autoimmune disorders such as cutaneous lupus erythematosus, and alopecia areata, depending on the patient’s characteristics [3]. This condition affects 2% of the world’s population. Twenty percent of cases occur in children, and 60% of patients develop the disease before the age of 20, making AA a common cause of consultation in pediatric dermatology. It is more common in females, with a 2:1 ratio compared to males [1,2,4,5].

Regarding the most frequent triggers of alopecia areata Childhood stressors account for 67.2% of the total, and autoimmune diseases account for 32.8% of the total, as reported in published studies on the psychological impact of AA in children [6,7]. The types of stressful events most consistently associated with AA include school or education-related problems (exams, excessive homework, performance pressure, changing schools, relationships with teachers and classmates), family conditions (relationship between parents, death of a parent, being alone without parents, financial problems, family disputes), associated comorbidities, and accidents [5-7].

AA is Classified According to its Clinical Presentation (Table 1)

Table 1: Classification of Alopecia Areata		
Type/Pattern	Characteristics	Forecast
Single plate	A single plate, round/oval.	Better prognosis
Multiple/multifocal plaques	Several plates may converge, possible evolution to AT/AU.	Generally good
Ophiasis / ophiasic	Symmetrical band in temporal and occipital areas.	Treatment resistant
Saisaifo (inverse ophiasis)	It respects the temporal and occipital areas, but affects the rest.	Less frequent
Alopecia totalis (AT)	Complete/almost complete loss of scalp hair.	Less favorable prognosis
Alopecia universalis (AU)	Loss of all body hair, scalp, eyebrows, eyelashes, body).	More serious
Diffuse/unknown	Diffuse hair loss without defined plaques, difficult to diagnose	Infrequent
Eyebrows and eyelashes	It exclusively affects eyebrows and/or eyelashes, and may accompany other patterns.	Variable

In our patient's case, she presented clinical characteristics of ophiasic and eyelash alopecia areata [8].

Treatment of pediatric alopecia areata consists of first-line therapy, which is topical or infiltrated corticosteroids, especially in cases of mild, localized alopecia. Although some literature mentions infiltrated steroids in children, others do not, due to pain. In addition, topical immunotherapy and systemic treatment are used in more extensive cases of alopecia, such as oral glucocorticoids, methotrexate, and the second-line topical vasodilator minoxidil hair lotion. Other drugs used include cyclosporine, tacrolimus, sulfasalazine, and azathioprine. Other drugs, such as prostaglandin analogues, are available for treatment of alopecia areata in the eyelashes and eyebrows, ciliary madarosis, or milfosis.

The mechanism of action of latanoprost promotes a rapid induction of the hair growth cycle into the anagen phase. Prostaglandin receptors are expressed in all ocular tissues. Eyelash hair follicles also have a population of cells expressing these receptors in the dermal papilla and outer root sheath. The dermal papilla coordinates the follicular responses of increased pigmentation and growth in anagen follicles. It constitutes a novel, accessible therapy for eyelash AA, with satisfactory results in many cases without harmful effects on health [8-11].

Conclusion

Ophioptic alopecia areata in children accompanied by ciliary madarosis accounts for approximately 1% of reported cases. Treatment with prostaglandin analogues such as latanoprost has proven effective in treating ciliary madarosis. It is essential to emphasize the importance of psychological support in these children, as emotional factors and stress can trigger and aggravate the disease. Therefore, a comprehensive approach combining dermatological treatment and emotional support is essential to improve the quality of life of pediatric patients with this condition.

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