

# Alopecia areata in Black African patients: epidemiological, clinical, and therapeutic aspects

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## ABSTRACT

**Background:** The aim was to describe the epidemiological, clinical, and therapeutic aspects of alopecia areata in Black African patients. **Material and Methods:** This was a retrospective descriptive study conducted at the Dermatology and Venerology Department of the University Hospital Center of Treichville over a 5-year. **Results:** The prevalence of alopecia areata was 0.2%. The mean age was 24.6 years and the male-to-female ratio was 1.47. Stress preceding the symptomatology was found in 3 cases. As for the clinical distribution, there were 25 cases of plaque-type alopecia areata, 10 cases of total descending alopecia areata, and 7 cases of universal alopecia areata. There was no nail damage and no associated pathologies. Local treatment only was administered in 31 cases, local and systemic treatment in 8 cases, and systemic treatment only in 3 cases. **Conclusions:** Alopecia areata predominates in young male populations and pathologies associated with alopecia areata are very rare.

**Key words:** Alopecia areata; Black skin; Inflammatory dermatoses

## INTRODUCTION

It leaves little doubt that hair is an important personal asset especially crucial for maintaining one's physical appearance, and losing it, in part or whole, can greatly affect their quality of life. Several pathologies can lead to hair loss. As for the scalp, alopecia areata is the second most common cause of alopecia in West Africa after ringworm [1,2]. Its frequency varies from region to region and its diagnosis is essentially clinical. Alopecia areata is often associated with other autoimmune diseases. It is difficult to deal with and results are often disappointing. Its occurrence in black people, and especially in sub-Saharan Africa, has received little study. A deeper knowledge of alopecia areata in the region of tropical Africa will make it possible to identify its particularities and to develop treatment protocols adapted to patients suffering from it. Herein, we describe the experience of the Dermatology

Department of the University Hospital Center of Treichville after several years of treatment of alopecia areata. The objective of this study was to describe the epidemiological, clinical, and therapeutic aspects of alopecia areata in Black African patients in Abidjan.

## MATERIALS AND METHODS

This was a cross-sectional, retrospective, descriptive, and monocentric study that took place from January 1, 2014, through December 31, 2018, for a total period of five years, at the Dermatology Department of the University Hospital Center of Treichville in Abidjan, Côte d'Ivoire. The department is the largest reference center for skin diseases in Côte d'Ivoire in general and chronic dermatoses in particular. Included in the study population were all patients seen in consultation for alopecia areata during the study period. Diagnoses of

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alopecia areata were reached on the basis of clinical and/or histological examinations. Caucasian patients and black patients residing outside of sub-Saharan Africa were excluded. The following epidemiological, clinical, and evolutionary parameters were sought: age, sex, medical history, type of alopecia areata, duration of evolution, treatment. Data were compiled and analyzed with the software Epi Info, version 3.5.1.

### Ethics Statement

During the study, we did not conduct any examination on animals or humans. All the data were retrieved from medical files. No information concerning the identity of the patients was mentioned in the study.

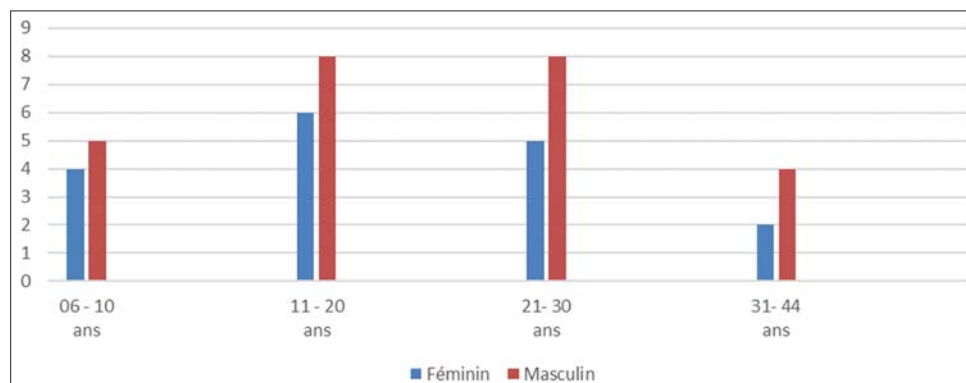
### RESULTS

During the study period, 39,603 patients were seen in consultation, including 42 cases of alopecia areata, giving a prevalence of 0.2%. The average age was 24.6 years, ranging from 6 to 44 years. There was a male prevalence, with 25 (59.5%) cases, and a male-to-female ratio of 1.47. The distribution of patients by sex and age group was predominantly male in all age groups (Fig. 1). Schoolchildren and students were in the majority, with 21 (50%) cases, followed by patients performing informal activities, in 11 (26.2%) cases. The majority of patients were from Abidjan or its suburbs (92.8%). Stress preceding the symptomatology was found in 3 (7.1%) cases. The symptomatology had evolved for 21.38 months (i.e., 1 year and 9 months) before the consultation. There were 25 cases of plaque-type alopecia areata (3 cases of ophiasis, 2 in the right temple, 2 in the vertex, and 18 sparse cases), 10 cases of total descending alopecia areata, and 7 cases of universal alopecia areata (Fig. 2). There was no nail damage and no associated pathologies. Local treatment only was

administered in 31 cases, local and systemic treatment in 8 cases, and systemic treatment only in 3 cases. Local treatment involved the prescription of dermocorticoids in 25 cases, 2% minoxidil in 12 cases, and a rubefacient gel in 8 patients. Systemic therapy included prednisone in 10 cases and methotrexate in one case.

### DISCUSSION

Alopecia areata is an autoimmune disease that destroys hair follicles. Its prevalence in the world population is estimated at around 2% [3]. In sub-Saharan Africa, especially in Burkina-Faso and Nigeria, alopecia areata represents 26.4% and 38.1%, respectively, of the causes of alopecia in hospitals [1,2]. The prevalence of alopecia areata in our department—estimated at 0.2%—is lower than what is reported in the literature: between 0.57% and 3.8% [4]. This might be due to selection bias. In fact, public health structures such as ours most often welcome patients who lack health insurance or are financially destitute. Thus, patients in a more advantageous financial position or who do have health insurance may consult in private facilities, reducing the prevalence of certain pathologies in hospitals. Alopecia areata predominates younger populations, with an average age of onset of 33 years and extremes ranging from 25.2 to 36.3 years [3,4]. The average age of the patients in our study, which was 24.6 years, was relatively lower than that reported by other studies [3,4]. In our study, males predominated in all age groups. This might be explained by the fact that alopecia areata tends to be upsetting and more disconcerting to young males because, what would otherwise be easier for most young females, the short hair typically worn by young males is not enough to camouflage the lesions. According to Salam et al., the most common etiology of nonscarring alopecia in African women is traction alopecia [5]. Several pathologies can be associated



**Figure 1:** Distribution of patients by sex and age group.



**Figure 2:** Universalis alopecia areata in a young female.

with alopecia areata, and these include thyroiditis, vitiligo, psoriasis, diabetes, lichen planus, atopic dermatitis, and numerous other diseases described in the literature [6-9]. However, our study found no pathologies associated with alopecia areata. Only stress was found in 23% of our cases, and this could have been due to the high prevalence of poverty among them. Indeed, people with insufficient financial means fail to return after the first consultation to see the doctor and receive further medical examination. Such a lack of resources also explains the long consultation time (21.38 months) found in our study. Apart from this, we believe that this observation might be a peculiarity of alopecia areata in Africa, given that certain pathologies may be clinically discovered. The clinical forms found were proportionally identical to those in the literature [3,4,6,7]. Treatment in our work context was based on locally applied topical remedies; these were mainly dermocorticoids and minoxidil solution, used in combination or not. In recent years, several treatments have been used for the management of alopecia areata [10-13]. However, despite the scientific advances in pathophysiology made in recent years, no treatment provides complete satisfaction, especially in the presence of ophiasis alopecia areata or total alopecia areata.

## CONCLUSION

Alopecia areata is an inflammatory condition of the scalp with a relatively low frequency in our context. It occurs mostly in young males. Pathologies associated with alopecia areata are very rarely found and local treatment is still topical.

## Statement of Human and Animal Rights

All the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the 2008 revision of the Declaration of Helsinki of 1975.

## Statement of Informed Consent

Informed consent for participation in this study was obtained from all patients.

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