

Childhood Vitiligo Seen in Dermatology Department of the University Hospital Joseph Raseta Befelatanana, Antananarivo, Madagascar

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Abstract

Introduction: Vitiligo is an acquired dermatosis characterized by achromic macules. This is a common reason for consultation in dermatology. This condition, which is usually free of functional signs, can cause unbearable psychological pain for affected children. The objective of this study is to describe the epidemio-clinical profile of vitiligo in children under 15 years of age.

Methods: A descriptive retrospective study was conducted over a period of 36 months from January 2014 to December 2016 and covering all cases of children under 15 years old seen in consultation in the Dermatology department of Joseph Raseta Befelatanana Hospital University. Antananarivo.

Results: The prevalence of vitiligo in children was 3.74%, i.e. 64 cases out of 951 children seen in consultation. The average age was 9.01 years with a sex ratio of 0.39. Of these, 21.87% had a history of atopy and 17.18% had a family history of vitiligo. The majority (73.43%) had only one achromic stain. Genital localization was significantly more common in the female genus, with 16 locations in the female genus versus 4 locations in the male genus with a $p < 0.005$. Non-segmental vitiligo including the acrofacial and vulgar type constituted 46.87% of cases, followed by the indeterminate type in 43.75% of cases and the segmental type in 9.37% of cases.

Conclusion: These results are an important tool not only to serve as a database but also to guide the diagnosis and treatment of vitiligo in children.

Keywords: Vitiligo; Children; Epidemiology; Antananarivo

Introduction

Leukoderma is a common reason for consultation in dermatology, especially in children [1]. Vitiligo is a multifactorial acquired dermatosis characterized by the presence of achromic macules caused by chronic and progressive loss of melanocytes. The exact pathogenesis of vitiligo remains undetermined. Various theories have been suggested for the cause of melanocyte loss in vitiligo; some have proposed that vitiligo is a multifactorial disease, with both genetic, oxidative stress and environmental factors implicated in its initiation. However, the autoimmune or autoinflammatory theory is the leading causation hypothesis [2]. It is a benign, non-contagious, painless but accompanied by aesthetic damage later causing psychological problems for the child causing concern for parents [3,4].

Vitiligo often begins before the age of 10 in 25% of cases [5]. Although the worldwide prevalence of vitiligo in general is estimated at 0.06% to 2.28% [6], the pediatric prevalence of vitiligo is still poorly understood, particularly in Madagascar.

Aim of the Study

The aim of this study is to describe the epidemiological and clinical profile of the vitiligo of the child seen at the Dermatology Department of the Joseph Raseta Befelatanana Hospital University Hospital of Antananarivo.

Methods

A descriptive retrospective study was conducted at the Dermatology Department of the University Hospital Joseph Raseta Befelatanana, Antananarivo in children under 16 years of age with vitiligo over a 36-month period from January 2014 to December 2016. We included children seen for leukoderma diagnosed as vitiligo by medical practitioners specialists in dermatology. Patients with incomplete clinical records and cases of undiagnosed leukoderma as vitiligo were excluded. We analyzed for each patient demographic parameters such as age and gender; clinical parameters such as age of onset of lesions, personal history, family history of vitiligo (first degree and/or second degree), distribution of lesions and associated diseases. The data collections were carried out by the Excel 2010 software. The statistical analysis was processed on the EPI-INFO software version 3.5.3 year 2011 and the result was retained as significant for a P value less than 0.05.

Results

During the 36-month study period, 951 children had been admitted to consultation, of whom 64 had been diagnosed with vitiligo, a frequency of 6.72%. Out of 4594 patients seen in consultation, the prevalence of vitiligo in children was 1.39%. The youngest was 2 years old and the average age was 9.01 years old. The sex ratio was 0.39 with 46 female-born children (71.87%) and 18 male-born children (28.12%). The time between the onset of illness and the first consultation varies between one month and sixty months with an average delay of 12.18 months. Regarding predisposing factors, 21.87% of our patients were atopic and no cases of dysthyroidism or autoimmune disease were reported. Eleven patients had a family history of vitiligo of which 1 of the first degree (mother) (Figure 1) and 10 of the second degree (grandfather, uncle, or aunt). Although the majority (73.43%) had only one achromic spot, the number of lesion distributions ranged from one to four sites with an average distribution over 1.39 sites. Lesions were mainly localized in the face (24.72%), genital (22.48%), limbs (20.22%), trunk (19.10%), scalp (7.86%) and extremities (5.62%) (Figure 2). There was a correlation between genital vitiligo localization and gender. The female genital location was significantly more frequent in the female genus, i.e. 16 localizations in the female genus versus 4 localizations in the male genus with $p < 0.0012$. Non-segmental vitiligo including the acrofacial and vulgar type constituted 46.87% of cases, followed by indeterminate type in 43.75% of cases and segmental type (Figure 3) in 9.37% of cases (Table 1). From a paraclinical point of view, twenty-one patients had done glycemic index (32.81%), and of these, only one had hyperglycemia. Twenty-three TSH assays were performed in 35.95% revealing a single case of hyperthyroidism. No patient had skin



Figure 1: Family Vitiligo with involvement of the girl as well as the mother (University Hospital Joseph Raseta Befelatanana Department of Dermatology Archive).

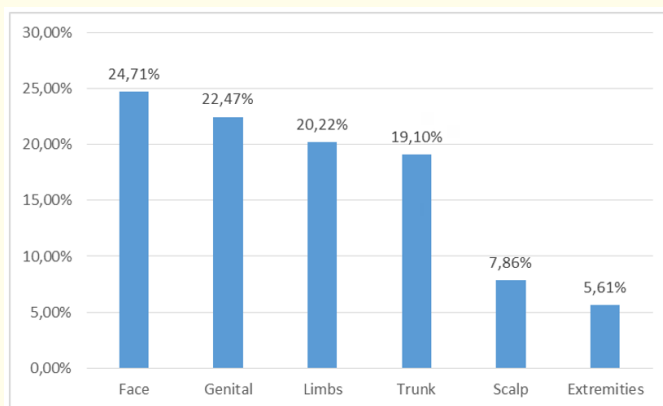


Figure 2: Distribution of patients by location of lesions.



Figure 3: Segmental vitiligo (University Hospital Joseph Raseta Befelatanana Department of Dermatology Archive).

	Staff (n)	Percentage (%)
Non-segmental Vitiligo	30	46,87
Vitiligo undetermined	28	43,75
Segmental vitiligo	6	9,37

Table 1: Distribution of patients by type of lesion.

biopsies.

Discussion

The prevalence of vitiligo varies greatly from one series to another. This inconstancy depends on the population considered. In our study, if we refer to the children who consulted, the prevalence of vitiligo in children was around 6.72%. Considering all patients who consulted without regard to age, this prevalence of child vitiligo decreased to 1.39%. In our country, in Antananarivo in 2005 the prevalence of vitiligo was 3.52% [7]. In Mahajanga from 1996 to 2008, it was 3.27% [8]. In 2007, during the study of the main dermatological diseases of the child seen in Antananarivo [9], autonomous dermatosis was the second leading cause of consultation in children and 106 cases of vitiligo were treated, i.e. 35.1% of this autonomous dermatosis. Our result is similar to that found in Saudi Arabia with a prevalence of 1.98% [10] and is in the range described by Kruger and Al worldwide in 2012 ranging from 0.06% to 2.28% [6] Unlike that of Ali AR. and

al with an average age of 7.9 years [11], our average age was 9.01 years. For the sex ratio, our figure agrees with those found by authors previously in Bordeaux [12], China [13], India [14] revealing a predominance of the female gender, but a discrepancy with that of Al Fahaad and A Hamad [10] where men were more numerous. The disease had evolved on average for more than one year 12,18 months before the first consultation, this time is much higher than that found by some institutions that is 49.7 weeks or 4.14 months which reflected negligence or ignorance of the need for care. In our study, no favoring factor recalling the Koebner phenomenon was found. About 22% of children had a concept of atopy versus 5.3% in the series Ali AR., *et al* [11]. An antecedent of the first and second degree of vitiligo was found in 17,18% of our patients testifying to the presence of genetic factors in the appearance of vitiligo [15]. And that vitiligo appeared at an early age when there was a family history of vitiligo [16]. The diagnosis of vitiligo is mainly clinical, our results are similar to those of the literature concerning the type and observed in order of decreasing frequency the non-segmental vitiligo including mainly the acrofacial and vulgar types followed by the indeterminate form and the segmental form [11,17,18]. The lesions were mainly located in the face (24.72%), genitals (22.48%). The frequency of facial lesions in our series is similar to that reported in Morocco by Mahha, which was 28% [19]. Genital localizations concerned 5.3% of cases for Ali AR., *et al* [11] and 12% of cases for Mahha [19], which is significantly lower than the one we observed in our study. According to our results, the female gender predisposes significantly to the genital location of the lesions. In the literature gender is not described as a risk factor in the appearance of vitiligo of the child.

Conclusion

Although it is a benign condition, the child's vitiligo can have a psychosocial impact because it can be a source of stigma. The knowledge of epidemiological data on vitiligo of the child can be contributory in the improvement of the opinions towards the pathology. Several patients had consulted only one year after the onset of the disease in view of the multitude of clinical types and the existence of predisposing factors.

Author's Contribution

All authors contributed to this study. All authors have read and approved the final version of the manuscript

Conflicts of Interest

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