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The present study was carried out at Instituto Lauro de Souza Lima (ILSL) - Bauru (SP), Brazil.

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### ABSTRACT

**Introdução:** *Vitiligo is an acquired autoimmune form of hypopigmentation or depigmentation in which half of the cases begins in childhood.* 

**Objectives:** To describe the clinical and epidemiological profile of childhood vitiligo in a referral center for dermatology.

**Methods:** A cross-sectional, descriptive study was carried out based on the analysis of medical records of patients younger than 13 years diagnosed with vitiligo from 2004 to 2014.

**Results:** Of the 113 cases identified, 54% were female and 46% male, the age ranged from 0 to 12 years, with most patients in the 4-8 years-old subgroup (54.8%). In 59% of the medical records there was no record of triggering factors of vitiligo; 31% of patients associated the onset of the illness to emotional stress, 3% to physical trauma and 7% did not associate it to any triggering factor.

**Conclusions:** The discreet prevalence in women has also been reported in other studies. Vitiligo behavior in children is different from that observed in adults. The influence of psychological factors as triggers and potential lasting effects on self-esteem should be considered in the approach of the patient. Although studies on vitiligo in this age group are scarce in the literature, the results of the present study were similar to the reports already available in the literature.

Keywords: child; epidemiology; vitiligo

### **RESUMO**

**Introdução:** O vitiligo é forma adquirida autoimune de hipopigmentação ou despigmentação, iniciando-se na infância metade de seus casos.

**Objetivos**: Traçar o perfil clínico e epidemiológico do vitiligo infantil em um centro de referência em dermatologia.

**Métodos**: Estudo transversal e descritivo com análise dos prontuários de pacientes com menos de 13 anos diagnosticados como portadores de vitiligo entre 2004 e 2014.

**Resultados**: Dos 113 casos identificados, 54% eram do sexo feminino e 46% do sexo masculino; a idade variou de zero a 12 anos com a maioria dos pacientes (54,8%) no subgrupo de quatro a oito anos. Em 59% dos prontuários não havia registro sobre fatores desencadeantes do vitiligo; 31% dos pacientes associaram o início da doença a estresse emocional, 3% a trauma físico, e 7% não associaram a fator desencadeante.

**Conclusões**: A discreta prevalência no sexo feminino também foi descrita em outros estudos. O comportamento do vitiligo na criança é diferente daquele observado nos adultos. A influência dos fatores psicológicos como desencadeantes e os potenciais efeitos duradouros na autoestima devem ser levados em consideração na abordagem do paciente. Os resultados deste trabalho foram semelhantes aos relatos existentes sobre o vitiligo nessa faixa etária, que são, aliás, poucos na literatura. **Palavras-chave:** criança; epidemiologia; vitiligo

### INTRODUCTION

Vitiligo is an acquired autoimmune form of loss of pigment characterized by hypopigmentation or depigmentation.<sup>1</sup> It affects 0.5% to 2.0% of the world's population, with half of the cases beginning in childhood.<sup>1-3</sup> For some authors, the vitiligo's disfiguring and unsightly potential correlates with depression and other psychosocial disorders at different stages of life, including childhood and preadolescence.<sup>4-6</sup> Studies have supported the theory that skin disorders, especially vitiligo, have interference on the individuals' psychosocial development.<sup>1, 4, 5, 7, 8</sup> This paper is aimed at outlining the clinical and epidemiological profile of patients under 13 years of age diagnosed with vitiligo in a dermatology referral center in the city of São Paulo - Brazil. In this manner, the authors intend to warn dermatologists of this dermatosis, which can cause harmful effects to the children's health.

### **METHODS**

This is a cross-sectional descriptive study with retrospective analysis of records of all patients younger than 13 years who were diagnosed with vitiligo in the period July 2004 – July 2014 that used a non-probabilistic sampling method for convenience, in which 113 cases were identified.

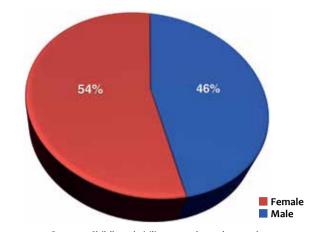
A research clinical and epidemiological data was carried out including gender, age group, lesion topography, elapsed time from the first symptom to diagnosis, presence of triggering factors and treatment used. According to the clinical presentation, the patients' vitiligo were classified into six types: focal (one or more depigmented spots or patches in some area without distribution by dermatome), segmental (one or more spots or patches in a dermatome or unilateral segment of the body), vulgaris (widely distributed spots or patches), acrofacial (face and acral region, symmetric), universal (affected area of 80% or more), mucosal (one or more mucous membranes).

It is worth to note that due to the study's design, biases of measurement and information should be taken into consideration.

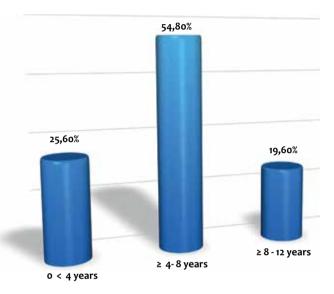
The data obtained were processed in Microsoft Excel<sup>®</sup>, with frequency and percentage analysis. This software was also used to prepare graphs. The principles of the Declaration of Helsinki were observed during the study.

# RESULTS

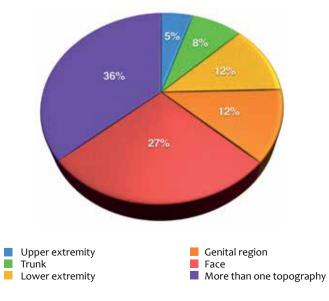
One hundred and thirteen (113) cases of childhood vitiligo were identified. Of these, 54% were female and 46% male patients (Graph 1). Ages ranged from 0 to 12 years, with patients having been grouped according as follows: between zero and four years of age (25.6%),  $\geq$  4-8 years of age (54.8%) and  $\geq$ 8-12 years of age (19.6%) (Graph 2). The most prevalent location of the first clinical manifestation was the face, affected isolated in 27% of cases and associated to other body segments in 36% of cases. Other body topographies affected were: genital region (12%), lower limbs (12%), trunk (8%) and upper limbs (5%) (Graph 3). The time elapsed between the first symptom and diagnosis was less than one year in 55.7% of cases. Most of



GRAPH 1: Childhood vitiligo prevalence by gender

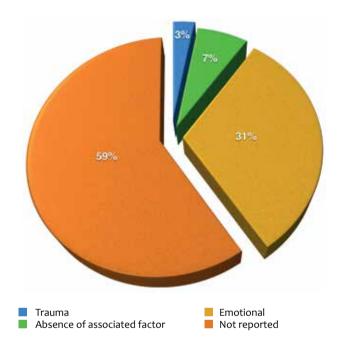


GRAPH 2: Childhood vitiligo prevalence by age group

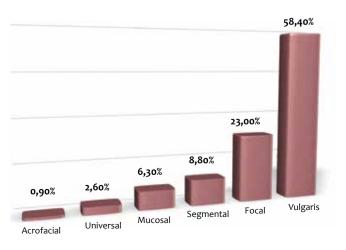


GRAPH 3: Topography of the first clinical manifestation

the patients (82.3%) denied family history of vitiligo. In 59% of the records there was no description of triggering factors; 31% of the patients associated the onset to emotional stress, 3% to physical trauma and 7% did not associate the onset to any triggering factor (Graph 4). According to the adopted classification, vitiligo vulgaris accounted for 58.4% of cases; the focal type to 23%, the segmental type for 8.8%, the mucosal type for 6.3%; the universal type to 2.6% and the acrofacial type to 0.9% (Graph 5). Topical treatment was used as monotherapy in 72% of patients. There was association of topical medications with heliotherapy in 5%, and the association with systemic therapy (corticosteroid, vitamins C and E, folic acid) was implemented in 9% of the cases. Phototherapy was used in 11% of patients, and 3% of the total did not undergo treatment in the service where the present



GRAPH 4: Triggering factors of childhood vitiligo



GRAPH 5: Vitiligo classification

study was performed. Twenty-three percent of the patients were referred for psychotherapy 20.3% of the patients studied.

# DISCUSSION

The discreet prevalence in women has also been reported in Brazilian and international studies.<sup>1-3, 9, 10</sup> This may be associated with the possible greater concern of parents at daughter's aesthetics.<sup>3,10</sup> The most affected age group was that ranging from 4 to 8 years of age (54.8%), however there are studies suggesting an older age.<sup>1, 3, 10</sup> In most patients the diagnosis occurred in less than one year, which can be considered early when compared to a recent Indian study where the average was 18.6 months<sup>1</sup> and the most common vitiligo type in childhood was the acrofacial type (38.1%) – whereas in line with the majority of the studies, the present paper suggested the vulgaris type is the most common (58.4%). The face was the most affected site (27.4%), also in line with most of other authors.<sup>1,2</sup> Vitiligo family history was positive in 17.7% of the patients, a lower percentage than that found in a diverse study (28.7%).<sup>1</sup> The psychological consequences of vitiligo during childhood are much described in the literature.<sup>3-5, 9</sup> Little is known, however, about the influence of possible triggering factors (psychological and physical trauma), frequently observed in the clinical practice. Parents of 34% of the studied children associated an event to the beginning of the lesions, with emotional stress being the most reported. A Brazilian nationwide study showed that in 60% of cases some relevant situation was referred (separation or death of a parent, sexual abuse or death of a pet).<sup>3</sup> Only 20.3% of our patients were referred to psychotherapy, evidencing the need to provide more prominence to this treatment modality. Topical monotherapy was the most used treatment due to lower risks of side effects and the benign character of the lesions.

#### CONCLUSION

Vitiligo behavior in children is different from that observed in adults. The influence of psychological factors as triggers, as well as the lasting effects on the patients' self-esteem should be considered when choosing a treatment. The results obtained in the present study were similar to those described in the few reports on the clinical and epidemiological profile of vitiligo in this age group existing in the literature.

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