

Clinical epidemiological profile of vitiligo in children and adolescents*

Perfil clínico-epidemiológico do vitiligo na criança e no adolescente

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Abstract: 94 children and 25 adolescents, 42% male and 58% female, aged predominantly between six and ten years old (40%) were studied at the Martagão Gesteira Childcare and Pediatrics Institute (Rio de Janeiro Federal University) between 2005 and 2011. The prevalent clinical form of vitiligo was the generalized type (34%). Although the clinical response was similar between the treatment modalities, we decided for low and high power topical steroids in our routine. Halo nevi were found in seven (5.9%) cases. Thirty (25%) patients underwent specialized evaluation and 18 (60%) reported some relevant psychological situation.

Keywords: Adolescent; Child; Epidemiology; Vitiligo

Resumo: Noventa e quatro crianças e 25 adolescentes, sendo 42% do sexo masculino e 58% do sexo feminino, com faixa etária predominante entre seis e 10 anos de idade (40%) e forma clínica prevalente de vitiligo generalizado (34%) foram estudados no Instituto de Puericultura e Pediatria Martagão Gesteira da UFRJ no período de 2005 a 2011. Embora a resposta clínica fosse semelhante entre as modalidades terapêuticas, optamos, na rotina, pelo corticoide tópico de baixa e alta potência. O nevo halo foi encontrado em sete (5,9%) casos. Dos 30 (25%) pacientes submetidos à avaliação especializada, 18 (60%) referiram alguma situação psicológica relevante.

Palavras-chave: Adolescente; Criança; Epidemiologia; Vitiligo

Vitiligo is characterized by achromatic patches of different shapes and sizes. It affects the general population worldwide with a variable frequency ranging from 0.38 to 2.9%.¹ The true etiopathogenic mechanism of vitiligo is still unknown (autoimmune, neurogenic, autotoxic and oxidative stress).² Currently it is considered an autoimmune disease.³

Recently, new classifications and nomenclatures have been suggested (The Vitiligo Global Issues Consensus Conference - VGICC), based on clinical features: segmental vitiligo (SV) and non-segmental vitiligo (NSV). The latter including the variants generalized, acrofacial and universal vitiligo.⁴

The NSV is the most common form, involving several body parts, usually with a symmetrical pattern; toes, hands and face are often the first affected. Acrofacial vitiligo is limited to the head, face, hands and feet, although this may subsequently become

widespread. Universal vitiligo is the most extensive form of the disease (80-90% of body surface), usually occurring in adulthood. Focal vitiligo refers to a small isolated patch with no segmental distribution and does not evolve to NSV after a period of at least two years. The segmental form refers to one or more achromatic macules distributed on one side of the body, usually respecting the midline.⁴

Mucosal vitiligo is located on the oral and/or genital mucosa. In the context of a non-segmental form, it is often classified as NSV. However, when the affected area is isolated, some authors classify it as an indeterminate form of vitiligo. The indeterminate form comprises isolated mucosal involvement and focal vitiligo.⁴

The current study - observational and retrospective - was conducted at the Martagão Gesteira Childcare and Pediatrics Institute (Rio de Janeiro

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Federal University) from 2005 to 2011 with the aim of analyzing the following variables: gender, age, clinical form according to VGICC, therapeutic and response, association with other skin diseases and psychological evaluation.

For statistical analysis we used chi-square and Fisher's exact test. It was considered statistically significant when $p < 0.05$.

The age of onset of clinical features ranged from 4 months to 14 years old. Of the 119 patients, 50 (42%) were male and 69 (58%) female. Most cases occurred between six and ten years old 40% (48/119), with a minority (11%) under two years old (13/119). Distribution according to age and sex showed that vitiligo appeared later in males ($p = 0.014$) (Table 1). Some authors report a greater number of cases in females.⁵ The predominance in females could however be related to a higher aesthetic concern among the female population.⁶ Regarding the age group, almost

half the cases were described in patients of between six and ten years (46.6%). The smallest number involved children under two years of age (5.5%).⁶

The prevalent clinical form was the generalized form, with 40 (34%) of the cases, followed by the segmental form accounting for 34 (29%) cases. The remainder corresponded to the indeterminate forms in 25 cases (21%), acrofacial forms in 16 cases (13%) and to the mucosal associated to NSV form in 4 cases (3%). Universal vitiligo was not observed. The distribution of cases by sex and clinical form revealed that in male patients the generalized and segmental forms predominated significantly when compared to females ($p = 0.008$) (Table 2). A study of the epidemiology of vitiligo in children also revealed a higher prevalence of the generalized form (78%).⁵ Other authors show the segmental form as the second most common in children.⁷

TABLE 1: Distribution of cases of vitiligo in children and adolescents according to age and sex

Age Group	Male		Female		Total	
	n	%	n	%	n	%
0 - 2 years (infant)	8	16%	5	7.20%	13	11%
2 - 5 years (preschool age)	12	24%	21	30.40%	33	28%
5 - 10 years (school age)	14	28%	34	49.30%	48	40%
10 - 18 years (adolescent)	16	32%	9	13%	25	21%
Total	50	42%	69	58%	119	100%

IPPMG - UFRJ (2005 - 2011) $\chi^2 P < 0.05$

TABLE 2: Distribution of cases of vitiligo in children and adolescents according to clinical form and sex

Classification	Clinical forms	Male		Female		Total	
		n	%	n	%	n	%
Non-segmental vitiligo	Acrofacial	5	10%	11	16%	16	13%
	Mucosal (more than one mucosal site)	0	0%	4	5.8%	4	3%
	Generalized	23	46%	17	24.60%	40	34%
Segmental vitiligo	Uni, bi, or plurisegmental	17	34%	17	24.60%	34	29%
Undetermined/ unclassified	Mucosal (one site in isolation)	5	10%	20	29%	25	21%
Total		50	42%	69	58%	119	100%

IPPMG - UFRJ (2005 - 2011) $\chi^2 P < 0.05$

To evaluate the therapeutic response, those who underwent irregular treatment, i.e. 19 (16%) of cases, were excluded. With regard to the treatment, the following were used: topical corticosteroids and topical PUVASOL - Oxsoralen 0.2% cream associated with sun exposure - in 44% (44/100), topical corticosteroids in 35% (35/100), tacrolimus in 10% (10/100),

topical PUVASOL in 6% (6/100) and narrowband UVB in 5% (5/100). The treatment time varied from one to two years.

Complete response was defined as the total repigmentation of lesions observed in 14% (14/100) of the cases and partial response as partial repigmentation, but which was nevertheless satisfactory for the

patient and physician in 83% of cases (83/100). Three 3% (3/100) had no response. Clinical response (total x partial) was similar between the clinical treatment modalities employed (Fisher's exact test - $p = 0.48$). Five patients underwent autologous melanocytes transplantation, with partial response. Topical PUVASOL in 95 children with vitiligo showed a partial response in 72 (75.7%) cases and total response in 13 (13.6%).⁸ Another study compared the use of clobetasol cream 0.05% and topical PUVASOL in children showing better results with clobetasol, achieving up to 75% repigmentation.⁹

22 (18.5%) patients had another dermatosis in addition to vitiligo. The Halo nevi was found in seven (5.9%) cases. Another study showed the halo nevi present in 4.9% of patients.¹⁰

30 (25%) of the 119 patients underwent psychological evaluation, and 18 (60%) of these reported a relevant situation such as parental separation, death of a parent, sexual abuse and death of a pet. Vitiligo that begins in childhood may be associated with psychological trauma, and results in lasting effects on self-esteem.⁵ One author reports that in 7.2% of cases a link exists between some emotional stress and the onset of symptoms.²

The course of vitiligo in children and adolescents is different from that observed in adults. While studies on the clinical and epidemiological profile of vitiligo in this age group are few in Brazilian and world literature, the results obtained in this study were nevertheless similar to those reported in the literature. □

REFERENCES

1. Nunes DH, Esser LM. Vitiligo epidemiological profile and association with thyroid disease. *An Bras Dermatol.* 2011;86:241-8.
2. Nogueira LS, Zancanaro PC, Azambuja RD. Vitiligo and emotions. *An Bras Dermatol.* 2009;84:39-43.
3. Rodríguez-Martín M, Sáez M, Merino de Paz N, Ferrer PC, Eliche MP, Rodríguez-Martín B, *et al.* When are laboratory tests indicated in patients with vitiligo? *Dermatoendocrinol.* 2012;4:53-7.
4. Ezzedine K, Lim HW, Suzuki T, Katayama I, Hamzavi I, Lan CC, *et al.* Revised classification/nomenclature of vitiligo and related issues: the Vitiligo Global Issues Consensus Conference. *Pigment Cell Melanoma Res.* 2012;25:E1-13.
5. Handa S, Dogra S. Epidemiology of childhood vitiligo: a study of 625 patients from north India. *Pediatr Dermatol.* 2003;20:207-10.
6. Silva CMR, Pereira LB, Gontijo B, Ribeiro GB. Childhood vitiligo: clinical and epidemiological characteristics. *An Bras Dermatol.* 2007;82:47-51.
7. Sori T, Nath AK, Thappa DM, Jaisankar TJ. Hypopigmentary disorders in children in South India. *Indian J Dermatol.* 2011;56:546-9.
8. Fernandes NC, Diogo C, Perez M, Lima MCNC, Spitz LK, Magalhães TC. Childhood vitiligo: a therapeutic analysis of 95 cases *An Bras Dermatol.* 2001;76:575-81.
9. Khalid M, Mujtaba G, Haroon TS. Comparison of 0.05% clobetasol propionate cream and topical Puvazol in childhood vitiligo. *Int J Dermatol.* 1995;34:203-5.
10. Raju BP, Sundar PK, Nagaraju U, Bhat V, Raveendra L, Keshavalu L. Characteristics of childhood vitiligo in Bangalore with special reference to associated ocular abnormalities. *J Indian Soc Tele Dermatol.* 2011;4:1-10.

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