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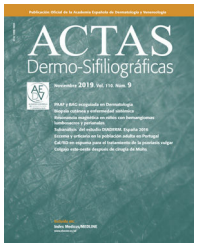

CASE AND RESEARCH LETTER

Scalp Melanoma: Clinical and Histopathological Findings

Melanoma en el cuero cabelludo: hallazgos clínicos histopatológicos

To the Editor:

Traditionally scalp melanoma has been listed as one of the worst prognosis melanomas together with upper back, posterior arms and neck (BANS). It is not clear, yet, whether this fact is due to the difficulty in exploration because of its location or a more aggressive histopathology behaviour. A recent review showed an increased number of scalp melanomas in the lasts years.[1]

We present a retrospective case series of 22 patients with scalp melanoma diagnosed between 2000 and 2018 in a tertiary hospital. The aim of this study was describing the clinical and histopathological characteristics of scalp melanoma in our population. Also, we tried to identify which clinical factors contributed to a higher Breslow thickness and worse staging at diagnose.

In our series, scalp melanomas represented 16% of total of head and neck melanomas. Median age at diagnose was 74 years old, with 59.1% of them over their seventies. Clinical and histopathological findings for invasive and in situ melanomas together are resumed in Table 1. Secondary, factors contributing to a higher Breslow or tumour stage were assessed using Fisher's exact test. For two Breslow thickness (<0.8, ≥0.8 mm) and tumour stage (0–I, II–IV) categories, amelanotic scalp melanomas showed increased tumoral stage ($p = 0.002$), whereas ulcerated melanomas exhibit a higher Breslow thickness ($p = 0.004$) and tumoral stage ($p = 0.009$). No significant differences were observed for any other variables analysed (Table 2).

Following last treatment AJCC recommendations, treatment of all our patients consisted of wide excision with specific margins, as well as performing sentinel node biopsy or imaging tests when indicated. At follow-up, two patients with IIB and IIIA tumoral stage developed distant metastasis died due to this cause.

According to the literature scalp melanoma is rare, representing 3–5%[2,3] of all melanomas and 14–49%[4] of total head and neck melanomas. Whereas melanoma is usually more frequent in young women and has been linked to burns in infancy, melanoma in head and neck, and also scalp, is usually described in old men with past history of actinic damage[4]. Xie et al.[2] performed a large transversal study of 1617 patients with head and neck melanomas, 292 of them on scalp and compared them with other head and neck locations. Comparing both studies, in our series we described a higher rate of in situ melanomas (19.67% vs 31.8%). Considering invasive and in situ scalp melanomas separately, they reported a higher male predominance for invasive melanomas (invasive: 79.9 vs 66.7%; in situ: 79 vs 85.7%) with lower median age for in situ melanomas (invasive: 69.3 vs 68.5 years old; in situ: 72.6 vs 78 years old). They observed a higher percentage of actinic damage history (invasive: 51.2% vs 13.33%; in situ: 72.6% vs 42.86%) and non-melanoma skin cancer (invasive: 48.5% vs 6.67%; in situ: 50% vs 28.57%) in their group. Also, a higher proportion of amelanotic melanomas (31.2% vs 18.3%) was described in their series. On the other hand, the majority of lesions were first noticed by other person than self, whereas in our series were first seen by one-self. Regarding histopathological findings, although we found superficial spreading melanoma to be the most common subtype, they described lentigo maligna melanoma (35.7%) as the most frequent subtype of scalp invasive melanoma.

Two of the patients of our series died due to systemic disease. Recurrence studies show a variable local, regional and systemic rate disease at 5-year time: 11.7–15%, 11–21.1% and 15–31.7%,[5,6] with a mean time until first recurrence of 11.8 months.[6] Global survival at 5-year has been reported around 58%, being significantly under other primary sites such as extremities, trunk or rest of head and neck ($p < 0.0001$).[7]

There is still little evidence about patient's and clinical factors which confer worse prognosis to scalp melanoma. In our series, the only factor which was related to a higher Breslow thickness and poorer staging was amelanosis.

To conclude, we would like to highlight the importance of systematically explore scalp melanoma in daily clinics. Further studies with higher evidence and sample size are needed to understand the clinical and histopathological behaviour of melanoma in this site.

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Table 1 Clinical and histopathological findings in patients with scalp melanoma (2000–2018), $n = 22$.

Patient clinical characteristics		Melanoma histopathological findings	
Previous personal or family history of melanoma	None	Subtype, *n* (%)	Superficial spreading melanoma: 10 (45.5)
			Lentigo maligna melanoma: 7 (31.8)
			Nodular melanoma: 4 (18.2)
			Other subtypes: 1 (4.5)
History of actinic damage and non-melanoma skin cancer, *n* (%)	5 (22.7), 3 (13.6)	Invasion, *n* (%)	In situ: 7 (31.8)
			Invasive: 15 (68.2)
Median age at diagnosis (years, range)	74 (31–88)	Breslow (median, range)	1 (0–25) mm
Sex (men, women), *n* (%)	16 (72.7), 6 (27.3)	Number of mitoses (median)	0 (0–52)/mm^2
Alopecia, *n* (%)	9 (47.1)	Ulceration, *n* (%)	5 (22.7)
Fitzpatrick phototype, *n* (%)	II: 9 (59.1), III: 13 (40.9)	Regression, *n* (%)	5 (23.8)
Melanoma clinical characteristics		Lymphovascular/neural invasion, *n* (%)	1 (4.8)
Who first noticed the lesion? *n* (%)	Patient: 16 (72.7)	pT, *n* (%)	T1a: 3 (13.63)
	Physician: 1 (4.2)		
	Hairdresser/barber: 1 (4.2)		
	Another person: 4 (16.7)		
Cause for the detection, *n* (%)	Previous lesions changing colour: 5 (25)		
	New lesion not previously seen: 4 (20)		
	Previous lesions becoming bigger: 8 (40)		
	Ulceration: 3 (15)		
Anatomical location, *n* (%)	Parietal: 12 (54.5)	*Tumour stage*[a], *n (%)*	
Frontal: 2 (9.1)		Temporal: 6 (27.3)	
Melanoma colour, *n* (%)	Occipital: 2 (9.1)	0: 7 (31.8)	
I A, B: 4 (18.2), 5 (22.7)	II A, B, C: 0, 1 (4.5), 4 (18.2)	III A, B, C, D: 1 (4.5), 0, 0, 0	
Median size (cm, range)	1.45 (0.4–5)		IV: 0
Development time, *n* (%)	<1 year: 7 (31.8)		
	1–2 years: 5 (22.7)		
	>2 years: 2 (9.1)		
	Not known: 8 (36.4)		

[a] Melanoma tumour stage was calculated considering AJCC recommendations corresponding to the year of diagnose.

Table 2 Factors contributing to a higher Breslow/tumour stage assessed using the Fisher's exact test.

Our series ($n = 22$)	Breslow thickness		p-Value	Tumour stage		p-Value
	<0.8	≥0.8		0–I	II–IV	
Sex						
Male ($n = 16$)	8 (50%)	8 (50%)	0.646	12 (75%)	4 (25%)	1
Female ($n = 6$)	2 (33.3%)	4 (66.7%)		4 (66.7%)	2 (33.3%)	
Alopecia ($n = 9$)	5 (55.6%)	4 (44.4%)	0.637	7 (77.8%)	2 (22.2%)	1
Amelanotic ($n = 4$)	0	4 (100%)	0.096	0	4 (100%)	0.002
Ulceration ($n = 5$)	0	5 (100%)	0.04	1 (20%)	4 (80%)	0.009
Regression ($n = 5$)	2 (40%)	3 (60%)	1	4 (80%)	1 (20%)	1
Lymphovascular/neural invasion ($n = 1$)	0	1 (100%)	1	0	1 (100%)	0.238

Conflicts of interest

None to declare.

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