

Prevalence of pain among melanoma patients

Prevalência de dor em pacientes com melanoma

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DOI 10.5935/1806-0013.20160010

ABSTRACT

BACKGROUND AND OBJECTIVES: The incidence of malignant melanoma is increasing worldwide. This is a tumor with high morbidity and mortality. Most common symptom of cancer patients is pain, which is complex, multifactorial and directly impacts patients' quality of life. However, there is little information about the prevalence of pain in this population. This study aimed at observing the prevalence of pain among melanoma patients in a reference center, in addition to obtaining information about treatments and pain-related incapacity.

METHODS: Descriptive, retrospective, exploratory study level I, with quantitative approach, carried out by means of the analysis of 306 medical records of melanoma patients.

RESULTS: The prevalence of pain was 38.2%. Among those with pain complaints, its location was the same as the injury in 20.5% of cases, in 8% of cases it was at the same site of malignant melanoma metastases and 55.8% have stated that pain was related to lymphadenectomy. Among such patients, 70% were treated to control pain, 2% were referred to specialized treatment and 75% have reported pain-related incapacity.

CONCLUSION: Persistent pain is a prevalent and disabling melanoma-related symptom which is related both to the surgical procedure and the staging, requiring early prevention and treatment actions.

Keywords: Melanoma, Pain, Prevalence.

RESUMO

JUSTIFICATIVA E OBJETIVOS: O melanoma maligno vem aumentando a sua incidência em todo o mundo; trata-se de uma neoplasia com elevada morbidade e mortalidade. O sintoma mais comum em pacientes com câncer é a dor, que é complexa, multifatorial e impacta diretamente a qualidade de vida dos pacientes. No entanto, há poucas informações sobre a prevalência

de dor nessa população. O objetivo deste estudo foi observar a prevalência de dor em pacientes portadores de melanoma em um serviço de referência, além de obter informações a respeito dos tratamentos e sobre a incapacidade relacionada à dor.

MÉTODOS: Estudo descritivo, retrospectivo, exploratório de nível I, com abordagem quantitativa, realizado por meio da análise de 306 prontuários de pacientes portadores de melanoma.

RESULTADOS: A prevalência de dor foi de 38,2%. Dentre os que se queixavam de dor, sua localização era a mesma da lesão em 20,5% dos casos, em 8% dos casos ela era no mesmo local das metástases do melanoma maligno e 55,8% responderam que a dor relacionava-se com a linfadenectomia. Dentre esses pacientes, 70% receberam tratamento para o controle da dor, 2% foram encaminhados para tratamento especializado e 75% relataram incapacidade relacionada à dor.

CONCLUSÃO: Dor persistente é um sintoma prevalente e incapacitante relacionado ao melanoma que se relaciona tanto com o procedimento cirúrgico quanto com o estadiamento, o que exige ações de prevenção e tratamento precoce.

Descritores: Dor, Melanoma, Prevalência.

INTRODUCTION

Malignant melanoma is an aggressive tumor, the incidence of which is increasing worldwide. In the United States, it is estimated that 2015 shall have 73870 new cases of the disease and approximately 9940 deaths by melanoma¹.

In Brazil, population-base data do not express the reality of the problem, especially when data such as pain are required^{2,3}.

In the same proportion that the incidence of melanoma increases, it is expected that related problems might be underestimated and undertreated. It is known that cancer pain is complex and multifactorial and is called "Total Pain" for involving different pathophysiological factors (nociceptive and neuropathic pain) in addition to being associated to the whole dimension of suffering. This feature is very clear in melanomas because they are tumors with high mortality rates and affecting different organs, especially skin, directly interfering with patients' self-image. It may evolve with cancer wounds and consequently social isolation, solitude and fear. All these aspects are directly related to the complexity of melanoma patients' pain⁵⁻⁷.

The etiology of melanoma pain may be associated to different factors, such as the presence of an injury, local inflammatory reactions in tumor or other tissues and chronic compression of adjacent tissues. It may also be related to treatment, chemotherapy, surgical injury resection, sentinel lymph node

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Submitted in August 27, 2015.

Accepted for publication in January 20, 2016.

Conflict of interests: none – Sponsoring sources: none.

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biopsy, lymphadenectomy, consequent edema, isolated limb perfusion and metastases. However, all these factors will be inevitably related to psychosocial aspects and to the impact of the disease on quality of life (QL) of such patients^{8,9}. Chronic pain induced by surgical procedures associated to the treatment of melanoma is also poorly known. In general, patients are submitted to primary or metastatic injuries biopsy to establish the diagnosis, enhance safety margins, sentinel lymph node biopsy (SLNB) to evaluate lymph node spread and/or to perform lymphadenectomy according to the state of the studied chain. In addition, in some cases, subsequent procedures are indicated for resection and biopsy of recurrences or metastases; there are also palliative procedures such as isolated limb perfusion, which are used to control the disease. However, there are no epidemiological data to favor a more effective approach and more effective measures to prevent pain during all treatment stages for this population^{10,11}. Considering the relevance of this disease for the world population and the importance of its pain, we felt the need to develop this study aiming at knowing the prevalence of pain in melanoma patients of a reference service, at identifying the frequency with which such patients are treated and referred to specialized treatment, as well as at establishing the relationship of pain and melanoma.

METHODS

This is a descriptive, retrospective study with quantitative approach, carried out by documental means (medical charts). We have evaluated 306 medical charts of melanoma patients during 2014 and first trimester of 2015. Absolute and relative frequencies were calculated for all variables, confidence interval of 95% was calculated for prevalence of pain¹², and to observe the association between pain complaint and staging Fisher Exact test¹² was used and respective odds ratio was calculated¹².

Inclusion criteria were patients with malignant melanoma being followed up by the above-mentioned reference service and under treatment until 2014.

A form with data extracted from patients' medical records was used for data collection. The form is made up of data regarding patients' identification, such as age and gender, and data such as diagnostic time, presence or not of pain, pain location and treatment and referral to specialized pain service.

This study was approved by the Ethics Committee, Hospital Israelita Albert Einstein, CAAE 44165315.8.3001.5134/2015.

RESULTS

Major prognostic factor for melanoma is staging, which depends on the depth of primary injury invasion or thickness (Breslow), of lymph node involvement and of the presence of distant metastasis. To control these factors during diagnosis and treatment, patients may be submitted to primary injury biopsy, resection or increasing of margins, study of the lymph node chain with SLNB and lymphadenectomy in cases

of positive SLNB (with the presence of malignant cells) or clinically palpable lymph nodes with suspected neoplastic involvement. Other metastasis resections or metastasectomies may be indicated in addition to chemotherapy, radiotherapy and immunotherapy for advanced cases. All this process may be more or less associated to pain.

As from the descriptive analysis of all study variables (Table 1) it is observed that among melanoma patients the prevalence of pain is 38.2%; however, with 95% confidence interval, the interval for the prevalence of pain goes from 32.7 to 43.6% (Figure 1).

Table 1. Descriptive analysis of all study variables

Questions	Answer	n	%
Pain complaint	No	189	61.8
	Yes	117	38.2
Is pain location the same of the primary injury (malignant melanoma)?	No	93	79.5
	Yes	24	20.5
Is pain location the same as the malignant melanoma metastasis?	No	108	92.3
	Yes	9	7.7
Pain location is related to malignant melanoma?	No	21	18.1
	Yes	95	81.9
Relation of pain with lymph node resection	SLNB	8	8.4
	Lymphadenectomy	53	55.8
	None of the above	34	35.8
Were you informed about pain treatment?	No	35	29.9
	Yes	82	70.1
Were you informed about specialized treatment (pain clinic)?	No	115	98.3
	Yes	2	1.7
Report of pain-related incapacity?	No	29	24.8
	Yes	88	75.2
Staging	I	81	26.5
	II	55	18.0
	III	74	24.2
	IV	38	12.4
	Tis	58	19.0

SLNB = sentinel lymph node biopsy; Tis = tumor in situ.

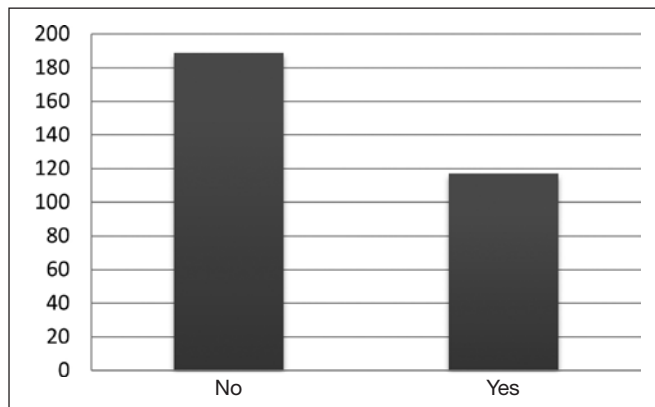


Figure 1. Pain complaint among studied patients

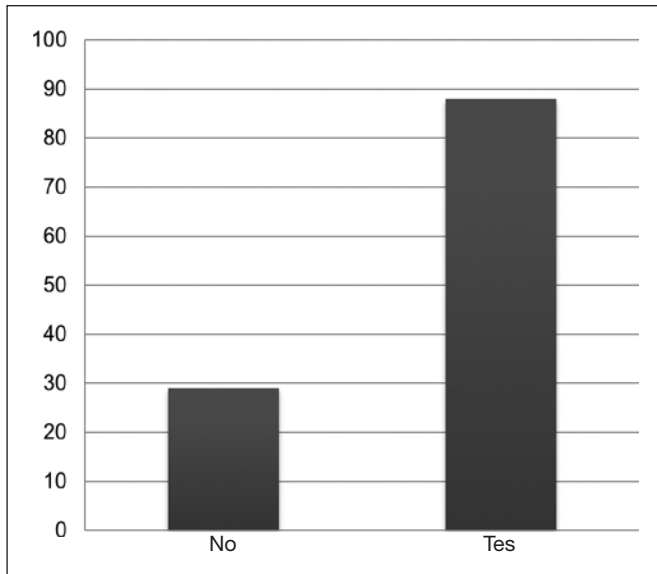


Figure 2. Pain-related incapacity report

Among those with pain (n=117), its location was the same as of the injury in 20.5% of cases and was essentially related to primary injury resection or to local recurrences; in 8% of cases pain was in the same site of malignant melanoma metastases, 55.8% of patients answered that pain was related to lymphadenectomy performed after the identification of positive sentinel lymph node or was related to the lymph node identified at clinical evaluation, and 8.4% have related it to SLNB.

Among these patients, 70% were treated for pain control, 2% were referred to specialized treatment and 75% have reported pain-related incapacity.

With regard to staging, 26.5% are in stage I, 18.0% in stage II, 24.2% in stage III and 12.4% in stage IV, being that 18.9% are in the *in situ* stage (Tis). The analysis of significant association ($p=0.000$) between pain and staging level (Table 2) shows that the chance of pain complaint for stage II individuals is 17.04 (5.44 to 83.85) times the chance of pain complaint for stage I individuals; the chance of pain complaint for stage III individuals is 89.84 (28.58 to 444.74) times the chance of pain complaint for stage I individuals; the chance of pain complaint for stage IV individuals is 230.42 (60.69 to 1714.31) times the chance of pain complaint for stage I individuals; pain complaint was statistically significant when comparing stage I and Tis.

Table 2. Comparison between pain complaint and staging level

Staging	Pain complaint				p value	OR	CI - 95%
	No	Yes	No	Yes			
I	79	97.5%	2	2.5%	0.000	1.00	-
II	33	60.0%	22	40.0%		17.04	[5.44; 83.85]
III	16	21.6%	58	78.4%		89.84	[28.58; 444.7]
IV	3	7.9%	35	92.1%		230.42	[60.69; 1714.3]
Tis	58	100.0%	0	0.0%		0.30	[0.01; 5.77]

OR = odds ratio; CI = confidence interval; Tis = tumor in situ.

DISCUSSION

Pain is a prevalent and disabling cancer-related symptom¹³. Persistent postoperative pain, including surgeries for cancer treatment, is a very common symptom^{13,14}. Among causes of pain in this group of patients, highest prevalence is related to lymphadenectomy, which is a procedure with high morbidity rate, and other studies are being carried out to define the real benefit of this procedure^{14,15}. Neuss et al.¹⁵ have studied 111 patients with melanoma after axillary lymphadenectomy and have found high prevalence of pain in this group, which was directly associated to postoperative incapacity, confirming our study results. So, there is the need for better care and pain treatment protocols for patients submitted to this procedure.

On one side pain was related to surgical procedure, it was also clear that pain prevalence increased according to staging, being worse in stages III and IV patients, showing the increasing need for specific care to patients with advanced disease.

CONCLUSION

Further studies are needed to establish the reality lived by melanoma patients, however, it has been shown the need for an early globalized assistance, starting at diagnostic time, but not forgetting the need to follow up and attention to those in more advanced stages of the disease. The objective is to provide better care, better control and better quality of life to this population.

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