Dermatomal Multiple Nodular Melanomas at Thoracal IV-X on the Right Back and Ribs

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LUSITA SYLVIA, SRI LESTARI, *RUSJDI ABBAS, **AZAMRIS
Dermatology – Venereology Deparment,
*Pathology-Anatomy Department,
**Surgery Department of Dr.M.Djamil Hospital/ Medical Faculty of Andalas University, Padang, Indonesia

Background
Nodular melanoma (NM) results from the malignant transformation of melanocyte that has vertical growth. Nodular melanoma is difficult to recognize in the early stage that can cause the late of management.

Case
A 50 year old Indonesian man with multiple nodular melanomas on the right back and ribs was reported. Initially, there was a blue black tumour on the right back 2 years ago that growing fast became multiple tumours at thoracal IV-X on the right back and ribs in last three months. There were burning sensation, painful and easy bleeding. The tumours were grouping papules, noduls and plaque at thoracal IV-X on the right back and ribs, variety colour (blue-black, amelanotic and erytematous), unilateral distribution, variety shape and size, defined border, hard consistency, smooth surface, and some of them had black crusts on top of the lesions. There were enlargement of right colli, supraclavicula, infraclavicula, axillae, and inguinal lymph nodes. Histophatology examination revealed melanocyte cells with vescicular nuclei and coarse chromatin under stratum corneum and granulosum layers, pleomorf, that expanded to papillary and reticular dermis (vertical growth) and brown pigments on dermis. This patient was in stage IIIC based on AJCC 2002 melanoma staging. Oncologist suggested chemotherapy, but he refused the therapy and died a month later.

Discussion
Nodular melanoma is the highest number of melanomas in Indonesia. This was the first case of dermatomal multiple nodular melanoma in our Department. The enlargement of lymph nodes suggested metastatic. There is no standard therapy for metastatic melanoma. Chemotherapy may be useful.

Keywords: *Nodular melanoma, vertical growth.*

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Lusita Sylvia, Sri Lestari, *Rusjdi Abbas, **Azamris

Dermatology – Venereology Deparment,
*Pathology-Anatomy Department,
**Surgery Department of Dr.M.Djamil Hospital/ Medical Faculty of Andalas University, Padang, Indonesia

Abstract

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Introduction

Melanoma results from the malignant transformation of melanocyte. Four major growth patterns of melanoma are lentigo melanoma, superficial spreading, nodular, and acral lentiginous melanoma.[1,2]

Melanoma has drawn considerable attention in the last decades due to its sharp increase in incidence. The American Cancer Society estimate that in 2002 alone melanoma will have developed in 87,800. In Indonesia melanoma is rare case, 1-3 % of all cancers in 1988. The second most common subtype of melanoma is nodular melanoma (NM) with frequency of 15-30% but in Indonesia nodular melanoma is the highest number of melanoma. Study by Lestari S, there were 16,2% malignant melanoma during 2000-2003 in Anatomic pathologic of West Sumatera. This was the first case of dermatomal multiple nodular melanomas in our Department. Risk factors for melanoma are sun exposure, phenotype, reaction of the skin to sunlight, occupation and social status, familial melanoma, melanocytic nevi, gender and hormonal factors.[1,3-6]

The trunk, head, and neck are the most frequent anatomic sites for NM. The peak incidence occurs > 50 years of age. Nodular Melanoma typically appears as a uniform dark blue-black, bluish-red, or amelanotic papule or nodule. NM may appear as a blueberry-shaped nodule with a thundercloud-gray appearance. Ulceration and bleeding from the lesion occurs frequently. Early recognition of NM can be difficult because they lack many of the conventional clinical features of melanoma. In certain cases, it may be difficulty to discriminate between NM and small hemangioma, pyogenic granulomas, blue naevus, ecrine poroma, and pigmented basal cells carcinoma.[1,7]

Histologic picture of NM may show large epitheloid cells with vescicular nuclei and coarse chromatin, spindle cells, small malignant melanocytes, or mixtures of all three. Usually, the tumors mass fills and expands the papillary dermis or invades between coarse collagen fibers of reticular dermis (vertical growth).[1,8]

Nodular Melanoma has poor prognosis. The treatment of choice is surgery. Current recommendations include the excision of a margin of normal-appearing skin around the tumors to ensure its complete removal. Lymph node dissection can be performed. In high-risk patient with lymph node involvement, high-dose interferon-α has demonstrated an improvement in disease-free and overall survival. There is no standard therapy for metastatic melanoma. Dacarbazine (DTIC) remains for initial chemotherapy for metastatic melanoma. Radiation therapy is an option as a palliative form of treatment for painful cutaneous lesions or for those large tumors that cause bleeding or neurologic or vascular compression. A combination of chemotherapy and biologic response modifier, is another alternative for metastatic melanoma. Several vaccines have been developed for treatment of stage III or IV melanoma.[1,2,8-10]

Case report

A 50-year-old Indonesian man came to the Dermato-Venereology Outpatient Department of Dr.M.Djamil Hospital on March 16th, 2005 with chief complaint

there were blue-black tumors that growing fast on his right back and ribs skin since 3 months ago. Initially, there was a blue black tumor on the right back 2 years ago. The tumor was growing fast became multiple tumors on the right back and ribs in last three months. At first, some of them appeared as red pimples or amelanotic pimples, and then became dark (blue-black) and larger. Those lesions were painful, burning sensation, and easy bleeding.There were lumps on his right neck 3 months ago, and on his upper right thigh (right inguinal) 2 months ago. There was no herpes zoster history. There was no breathing complain. There was no intensive headache. There was no decreased of his body weight. There were no family who suffered from this disease. He was a farmer with low social economic state.

Physical Examination revealed general appearance in normal state. Dermatology examination, the tumours were grouping papules, noduls and plaque at thoracal IV-X on the right back and ribs, variety colour (blue-black, amelanotic and erytematous), unilateral distribution, variety shape and size, defined border, hard consistency, smooth surface, and some of them had black crusts on top of the lesions. There were two enlargement of colli dextra lymph nodes (Ø ± 2 cm), three enlargement of supraclavicula & infraclavicula dextra lymph nodes (Ø ± 1,5 cm), three enlargement of axilla dextra lymph nodes (Ø ± 3 cm), two enlargement of inguinal dextra lymph nodes (Ø ± 2 cm). All of lymph nodes were dense, mobile, and pain.

Laboratory finding were routine blood, chemical blood and routine urine in normal limit. The working diagnosis was suspect malignant melanoma (nodular type) and the differential diagnosis was keloid. We suggested to biopsy of the tumor and lymph nodes, thoracal X-ray and abdominal USG. Histophatology examination revealed melanocyte cells with vescicular nuclei and coarse chromatin under stratum corneum and granulosum layers, pleomorf, that expanded to papillary and reticular dermis (vertical growth) and brown pigments on dermis. Thoracal X-ray revealed cord and pulmonary were normal, there was no metastatic sign. Abdominal USG result : there was no metastatic sign to the liver and to lymph nodes paraaorta.

Diagnosis was dermatomal multiple nodular melanoma stage IIIC based on AJCC 2002 melanoma staging. Prognosis were quo ad vitam malam, quo ad sanam malam, quo ad cosmeticum malam. We consulted to Oncologist (Surgery Department) and decided chemotherapy for this patient. Unfortunately, the patient refused the therapies. Finally, he died amonth later.

Discussion

In Anatomic pathologic deparment FKUI, there were 17 cases (11,6 %) of malignant melanoma that 8 cases were nodular melanoma in 1988. Study by Lestari S, there were 16,2% malignant melanoma during 2000-2003 in Anatomic pathologic of West Sumatera. This was the first case of dermatomal multiple nodular melanoma in our Department. [6,9]

At the first time, we confuced the clinical features of this desease with keloid as a result herpes zoster because of the lesions were painful and burning sensation like neuralgia post herpetic. There were hyperpigmented masses which some of them were smooth surface that their arrangement ware herpetiformis and unilateral. Finally we could excluded keloid because from anamnesis, this disease

appeared without history of herpes zoster disease. Histophatology finding didn't consistent with keloid.

The diagnosis based on anamnesis, physical examination, and histophatology examination. From anamnesis, we presumed that the disease was one of a malignancy of cutaneous. Because, the lesions growth rapidly, pain, itchy, and easy bleeding. He was a farmer that he often didn't wear blouse when digging the field. He got intensively sun exposure that had high risk for malignancy of cutaneous. Physical examination, the tumors were grouping papules, noduls and plaque at thoracal IV-X on the right back and ribs, variety colour (blue-black, amelanotic and erytematous), unilateral distribution, variety shape and size, defined border, hard consistency, smooth surface, and some of them had black crusts on top of the lesions. There were enlargement of right colli, supraclavicula, infraclavicula, axillae, and inguinal lymph nodes. Lymph nodes enlargement suggested the metastatic. Histophatology examination revealed melanocyte cells with vescicular nuclei and coarse chromatin under stratum corneum and granulosum layers, pleomorf, that expanded to papillary and reticular dermis (vertical growth) and brown pigments on dermis. Histophatology examination consistent with nodular melanoma.

Accurate documentation of the extent of melanoma is essential for determining the optimal treatment of patient and for assessing prognosis. The AJCC (American Joint Committee on Cancer) and the UICC (International Union Against Cancer) TNM (Tumor Node Metastasis) committees have approved a new melanoma staging system, which was implemented in 2002. This patient was in stage IIIC based on AJCC 2002 melanoma staging, its meant that this patient had a poor prognosis.

Table: the 2002 version of AJCC melanoma staging system

Proposed Stage Groupings for Cutaneous Melanoma

	Clinical Staging[1]			Pathologic Staging[2]		
	T	N	M	T	N	M
0	Tis	N0	M0	Tis	N0	M0
IA	T1a	N0	M0	T1a	N0	M0
IB	T1b	N0	M0	T1b	N0	M0
	T2a	N0	M0	T2a	N0	M0
IIA	T2b	N0	M0	T2b	N0	M0
	T3a	N0	M0	T3a	N0	M0
IIB	T3b	N0	M0	T3b	N0	M0
	T4a	N0	M0	T4a	N0	M0
IIC	T4b	N0	M0	T4b	N0	M0
III[3]	Any T	N1	M0			
		N2				
		N3				
IIIA				T1-4a	N1a	M0
				T1-4a	N2a	M0
IIIB				T1-4b	N1a	M0
				T1-4b	N2a	M0
				T1-4a	N1b	M0
				T1-4a	N2b	M0
				T1-4a/b	N2c	M0
IIIC				T1-4b	N1b	M0
				T1-4b	N2b	M0
				Any T	N3	M0
IV	Any T	Any N	Any M1	Any T	Any N	Any M1

Exerpting from reference 1

There is no effective treatment for this tumor when it has disseminated. We dicided chemotherapy for this patient. Unfortunately, the patient refused the therapy. Finally, he died a month later.

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