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Thesis for obtaining the Professional Pathological Statement

Title

To study vascular endothelial growth factor (VEGF) expression in cutaneous melanoma according to the tumor progression

Execution place

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SUMMARY

Background: Melanoma is the most serious skin cancer. There is an established correlation between thickness and aggressiveness of the tumor. Nevertheless, the potential prognostic value of VEGF and its correlation with tumor progression remains unresolved.

Material and Methods: 37 Paraffin blocks of cutaneous melanoma were obtained from Pathology department of Al-zahra hospital between 2005-2010. The sections were stained with monoclonal mouse antibodies (mAbs) against vascular endothelial growth factor A and staining were evaluated by distribution of expression of VEGF, 0, 0%; 1, 1-25%; 2, 25-50%; 3, >50% positively stained tumor cells and the staining intensity from 0 (negative) to 3 (strong). Then we sum intensity score with distribution score and calculate VEGF index and compare VEGF expression with tumor progression according to the vertical and radial growth, Clark's level and Breslow's dept. SPSS software is used to determine any relation between data with ANOVA, and chi-square method.

Results: from 37 patients 51.4% showed vertical growth pattern. Mean breslow's level was 1.84 ± 1.79 mm. 40.5, 8.1, 18.9, 16.2 and 16.2 percent had Clark's level I,II,III, IV and V respectively. There was a significant association between growth pattern statement and VEGF distribution, density and index ($P=0.006$, $P=0.005$, and $P=0.001$ respectively). There were a significant association between Clark's

level and VEGF intensity and index ($P=0.002$ and $P=0.002$ respectively) but this association there was not with VEGF distribution. VEGF intensity, distribution and index all had correlation with Breslow's depth (ANOVA $P=0.003$, $P<0.001$ and $P<0.001$ respectively) but for VEGF index, this correlation was in all subgroups.

Conclusion: Finally, we can say that VEGF-A expression (both distribution and intensity) is associated with progression of malignant melanoma and VEGF-A index can explain better this association.

CONTENTS:

Chapter 1: Introduction	1
I. Normal anatomy	1
II. Histologic and cytologic characteristics of melanoma	2
III. Molecular pathology of melanoma	4
IV. Prognostic factors in melanoma	7
V. Angiogenesis	8
VI. Review of the last studies	9
Chapter 2: Aims and hypothesis	11
Chapter 3: Materials and Methods	15
Chapter 4: Results	20
Chapter 5: Discussion	31
Conclusion	33
Recommendation	34
References	35
Biography	39

TABLE CONTENTS

Table 4-1: clinicopathologic characteristics of patients	20
Table 4-2: VEGF expression in specimens	21
Table 4-3: Association between Breslow's depth (mm) and VEGF distribution	28
Table 4-4: Association between Breslow's depth (mm) and VEGF intensity	29
Table 4-5: Association between Breslow's depth (mm) and VEGF index	30

DIAGRAM CONTENTS

Diagram 4-1: Comparison between VEGF distribution with Growth pattern of malignoma	22
Diagram 4-2: Comparison between VEGF intensity with growth Pattern of malignant melanoma	23
Diagram 4-3: Comparison between VEGF index with growth Pattern of malignant melanoma	24
Diagram 4-4: Comparison between VEGF distribution with Clark's level of invasion in malignant melanoma	25

Diagram4-5:Comparison between VEGF intensity with Clark's

Level of invasion in malignant melanoma 26

Diagram4-6:Comparison between VEGF index with Clark's

Level of invasion in malignant melanoma 27

Diagram4-7:Association between Breslow's depth (mm) and

VEGF index 30

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