MELANOMA AND MELANOCYTIC NAEVI

THE RATE OF MISSED MELANOMA IN SENTINEL NODE NEGATIVE PATIENTS: THE OTTAWA EXPERIENCE

Chloe Ward [1] - Jennifer MacIsaac [1] - Scott Bradshaw [2] - Louis Weatherhead [1]

University of Ottawa, Department of Medicine, Division of Dermatology, Ottawa, Canada [1] - University of Ottawa, Department of Pathology and Laboratory Medicine, Ottawa, Canada [2]

Introduction: Lymph node involvement is a major independent prognostic factor for survival in patients with malignant melanoma. Sentinel lymph node biopsy (SLNB) detection of microscopic melanoma nodal involvement has been shown to improve both five-year survival and five-year disease free survival.

In a retrospective study at the Ottawa Regional Cancer Centre (ORCC), 40/140 (28.6%) of patients with a single primary melanoma developed metastatic melanoma following negative SLNB at a mean follow-up of 63.3 months. This is substantially higher than the upper limit of rates reported in the literature, which range between 9-14%. The reason for this high rate of metastatic melanoma following negative SLNB at ORCC is not clear.

Objective: To determine the number of missed melanoma micrometastases in SLNBs originally reported as negative in patients followed at ORCC.

Methods: Test subjects for histological re-examination of SLNs in this study include all patients (40/140 patients) followed at ORCC who developed metastatic melanoma after a negative SLNB between 1999 and 2004. Four SLNBs (4/40) were excluded as original tissue could not be obtained. Control subjects (36/140) had a negative SLNB but did not develop metastatic melanoma within the follow-up period. Three hematoxylin and eosin (HE) stained levels were done for each SLN block (36 test, 36 controls) with a paired immunohistochemical stain (S100, HMB45, MART1) for each.

Results: Histological re-examination of additional levels revealed 4/36 (11%) cases from patients who developed metastases had missed positive sentinel lymph nodes, which were originally reported as negative. None of the 36 control cases (0/36) showed missed disease in the sentinel lymph nodes.

Conclusion: Histological re-examination revealed only a small portion of missed SLN

micrometastases. Technique alone cannot explain the high rate of metastatic melanoma in SLNB negative patients at five-year follow-up and other reasons for this high rate need to be examined.