Sentinel lymph node biopsy in patients with malignant melanoma

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Background. *The issue of elective lymph node dissection (ELND) in patients with malignant melanoma is one of the most controversial issues in the history of surgical oncology. There have been four randomized prospective surgical trials which have at present reached sufficient data maturity to draw relevant conclusions. The Intergroup Melanoma Surgical Trial recruited the highest number of patients (740) and was from the very beginning designed to identify a subgroup of melanoma patients (selected by different prognostic factors) who might benefit from ELND. The results showed that ELND statistically significantly improved the survival in a group of patients with nonulcerated melanomas with the tumor thickness of 1-2 mm and the tumor location on the limb. An attractive alternative approach to selection of patients with melanoma based on prognostic factors for ELND came in early 1990's when Morton et al. devised the technique of intraoperative lymphatic mapping, sentinel lymphadenectomy and selective complete lymph node dissection (LM/SL/SCLND). LM/SL/SCLND is today considered by most authorities, as a substitute for ELND if "technological transfer" of LM/SL/SCLND, which requires a multidisciplinary team, is consistently and accurately applied. Therefore it is advised to perform LM and SC in all patients with malignant melanoma of the thickness of 1-4 mm according to Breslow.*

Patients and methods. *From January 1999 to June 2000, LM and SC were performed in 8 patients (7 male, 1 female) after the excision of primary melanoma with a 2 mm margin. Preoperative lymphoscintigraphy was performed by using ^{99m}Tc-nanocolloid and radioactive "Hot spots" of regional nodes were marked on the skin. Before the re-excision of the primary lesion, Patent Blue was injected intracutaneously around the skin lesion to help additionally identifying the sentinel lymph nodes.*

Results. *The melanoma was located on the trunk in seven patients and on the head & neck in one patient. The average tumor thickness according to Breslow was 2.83 mm. The sentinel lymph nodes were located in one lymph node basin in five patients with trunk melanoma and in two lymph node basins (both axillas) in two patients. In the patient with a scalp melanoma, the lymph nodes were located retroauriculary (1) and on the second lymph node neck level (1). The average number of sentinel lymph nodes was 2.25.*

We managed to identify 14/18 sentinel lymph nodes. Pathological exam revealed micrometastases in one lymph node in three patients. In all 3 patients, a complete lymph node dissection was performed and no additional metastases were found. The complete lymph node dissection was performed also in two patients in whom sentinel lymph nodes were not found. One of these two patients had 3 metastatic lymph nodes.

Conclusion. *LM/SL/SCLND is a valuable substitute for ELND if applied consistently and accurately. It enables more individualized approach to the patients with malignant melanoma and therefore minimizes unnecessary morbidity in patients with negative lymph nodes.*

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