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POSTER

Health-Related Quality of Life Outcomes in Advanced Melanoma Patients After Palliative Treatment With Bleomycin-based Electrochemotherapy

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Background: The objective of the present study was to investigate health-related quality of life (HRQOL) in terms of symptoms and functional outcomes in advanced melanoma patients with skin metastases treated with palliative electrochemotherapy (ECT).

Material and Methods: Consecutive melanoma patients (n=51) with a minimum of six months' follow-up who underwent bleomycin-based ECT for skin metastases were asked to complete the European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 before treatment, and then at one-, two- and six-month follow-up. Relevant collected clinical data included number, localization and size of skin metastases, presence of visceral disease, treatment-related dermatologic toxicity, appearance of new skin lesions during the follow-up, complete response achievement after the first ECT, number of ECT cycles and additional systemic treatments (chemo- or immunotherapy). Wilcoxon test was performed to verify the influence of ECT treatment on *global health status*, moreover, data were analyzed with Mann-Whitney test to identify clinical aspects which could influence patients' reported outcome.

Results: The mean pre-treatment *global health status* score was 39.9 (20–58). One, two and six months after ECT application the mean score rose to 45.5 (23–58), 52.1 (23–60) and 44.7 (29–55), respectively. For each comparison, the improvement in *global health status* was statistically meaningful ($p < 0.001$). *Global health status* scores were higher in patients with fewer ($n \leq 20$, $p = 0.002$) and smaller (≤ 3 cm, $p < 0.001$) nodules. Patients achieving local complete remission after ECT reported and maintained higher *global health status* than the counterpart without superficial local control (Table 1). Patients who suffered of treatment-related G3 skin toxicity (n=10) reported worse outcomes, with mean *global health status* of 27 vs 50 and 40 vs 56 at one- and two-month follow-up, respectively ($p < 0.001$).

Conclusions: The first results of our ongoing study suggest that ECT can be considered an effective palliative treatment in melanoma patients with skin metastases, with an improvement of *global health status*. Overall, patients recovered well after ECT application, with better HRQOL scores in case of fewer and smaller skin metastases, achieving complete response. Treatment-related skin toxicity affect patients' reported outcome, and it should be advisable that future technical improvements in ECT procedure reduce the occurrence of dermatologic toxicity in order to maintain patients' quality of life.

Table: Relationship between EORTC QLQ-C30 global health status (QL) and clinical variables in 51 melanoma patients with skin metastases treated with bleomycin-based electrochemotherapy

Variable	N	QL(T0)*	p	QL (T1)**	p	QL (T2)***	p
Age			<0.257		0.159		0.127
≤70 y	27	40		45		55	
>70 y	24	42		50		56.5	
Nodule site			0.213		0.257		0.316
Trunk	26	40.5		45.5		54	
Limb	25	44		50		56	
No. of nodules			0.002		0.015		0.044
≤20	34	46		50		56	
>20	17	32		44		54	
Size			<0.001		<0.001		0.001
≤3 cm	11	28		36		45	
>3 cm	40	43.5		50		56	
CR			–		<0.001		0.004
Yes	25	–		51		56	
No	26	–		43.5		53	
Skin tox			–		<0.001		<0.001
Yes	10	–		27		40	
No	41	–		50		56	

*pre-treatment; **1-month follow-up; ***2-month follow-up.

CR, complete response (after 1st ECT); Skin tox, G3 skin toxicity at 1-month follow-up (according to common toxicity criteria, version 3.0).

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Asymptomatic Brain Metastases in Patients With Metastatic Malignant Melanoma

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Background: To identify the frequency of asymptomatic brain metastases (ABM) in patients with metastatic cutaneous melanoma prior to start of 1st line systemic treatment.

Material and Methods: Between 1995 and 2009, 730 patients were admitted to IL-2 based immunotherapy to 2 Departments of Oncology in Denmark. All patients were screened with computed tomography (CT) scans of the brain, chest and abdomen prior to treatment start.

Results: Among 730 analyzed patients, 144 (20%) had stage M1a, 121 (16%) M1b and 465 (64%) had M1c. 33 patients with symptomatic brain metastases were excluded from further analysis. Among 697 patients 80 (12%) had ABM. Patient characteristics did not differ significantly between patients with or without ABM. Magnetic resonance imaging (MRI) was primary diagnostic tool in 4 patients and in 28 out of 80 patients MRI was required to confirm ABM diagnosis after CT scan. 36 patients (45%) had more than 3 ABM. 43 (54%) patients with ABM received systemic therapy and in 17 (21%) IL-2 based treatment was administered despite diagnosis of ABM. Among 17 patients, 6 were treated with stereotactic radiotherapy or surgery before IL-2. The rest of the patients received cytotoxic chemotherapy (26 patients) or local treatment only (25) (stereotactic radiotherapy, whole brain radiotherapy, surgery). 531 patients (86%) without BM received IL-2 based treatment. Survival was significantly shorter for patients with ABM compared to patients without BM ($p < 0.0001$, med OS 4.5 vs. 9.2 months.).

Conclusion: 12% of melanoma patients referred for systemic treatment for metastasized disease had asymptomatic brain metastases. Survival was significantly shorter for those patients compared to patients without BM. Screening for brain metastases should continue be a part of baseline screening procedures for patients with metastatic melanoma.

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The Clinical Outcome of Chinese Non-melanoma Skin Carcinoma Patients After Radiotherapy With Megavoltage Electron

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Background: Non-melanoma skin cancer was the 9th most common cancer in Hong Kong. Radical radiotherapy for skin cancer is well established in western population but there are few reports on the clinical outcome in Chinese patients (pts). This retrospective review analyzed clinical endpoints of local control (LC), regional control (RC), metastatic-free survival (MFS), overall survival (OS), and Progressing free survival (PFS) in such pts after either primary or adjuvant radiotherapy (RT). In our institute, adjuvant radiotherapy is indicated in resected relapsed disease as well as if squamous cell carcinoma (SCC) size is more than 4 cm, resection margin is less than 0.5 cm and involved margin for basal cell carcinoma (BCC). Regional lymph node (LN) RT is indicated when there are multiple lymph nodes involved (LN), and extensive extracapsular invasion (EC). Radiotherapy is delivered with megavoltage electron.

Material and Methods: 30 pts had radiotherapy from 2006 to 2007. 13 were after excision or radical surgery. 15, and 11 pts had SCC and BCC respectively and 1 had Bowen's disease, 3 had Extramammary Paget's disease (EPD). All except one BCC were on face, while 30% SCC cases were on scalp and 20% on face and ear respectively. All EPD were in scrotal or perianal area. Overall, 15, 10, and 4 pts had stage T1, 2, 3 cancers respectively. 1 was unknown. All were free of LN involved.

Results: The median age was 80.3 (range: 52.2–103.5). 20 pts were female. 25 pts had more than one co-morbidity, such as ischaemic heart disease and prostate cancer. Electron energy used ranged from 6 MeV to 15 MeV and most common used was 6 MeV (43.3%). Bolus on skin surface was used in 23 cases and 9 of them used 1 cm thick. Total doses given were between 60 Gy in 24 daily fractions (fr) in 5 weeks to 30 Gy in 3 weekly fr. With alpha/beta ratio of 13.8 for skin cancer, biological effective dose (BED) calculated using linear-quadratic equation was 70.9 Gy_{13.8} to 51.7 Gy_{13.8} respectively. 42 Gy in 10 daily fr in 2 weeks were most commonly used scheme for both adjuvant and radical treatment and BED was 54.8 Gy_{13.8}. At a median follow-up of 46.2 months, one patient with 7 cm SCC over dorsum of hand had local and regional relapsed at 7.4 month and was on symptomatic care. He could not tolerate longer course of treatment and so he had 36 Gy in 6 daily fr with BED=51.7 Gy_{13.8} using 15 MeV electron. There was no metastasis. The 5 year LC, RC, MFS, PFS and OS rates were 96.7%, 96.7%, 100%, 72% and 75% respectively.

Conclusion: This report illustrated the effectiveness of electron therapy for Chinese patients. Short course treatment is effectively controlled skin carcinoma.