



POSTER PRESENTATION

Open Access

# Long-term response after electrochemotherapy in patients with relapsed or refractory cutaneous melanoma

Nicola Mozzillo<sup>1</sup>, Corrado Caracò<sup>1</sup>, Ugo Marone<sup>1\*</sup>, Ester Simeone<sup>2</sup>, Stefano Mori<sup>1</sup>, Lucia Benedetto<sup>1</sup>, Gianluca Di Monta<sup>1</sup>, Maria Luisa Di Cecilia<sup>1</sup>, Massimiliano Di Marzo<sup>1</sup>, Gerardo Botti<sup>3</sup>, Paolo Antonio Ascierto<sup>2</sup>

From Melanoma Bridge meeting 2013  
Naples, Italy. 5-8 December 2013

## Background

Treatment of early and multiple cutaneous unresectable recurrences is a major therapeutic problem with around 80% of patients relapsing within 5 years [1]. For lesions refractory to elective treatments, electrochemotherapy (ECT) involving electroporation combined with antineoplastic drug treatment appears to be a new potential option [2]. This study was undertaken to analyze the short- and long-term responses of lesions treated with ECT with intravenous injection of bleomycin in melanoma patients with in-transit disease or distant cutaneous metastases.

## Materials and methods

Between January 2007 and September 2012, 60 patients with relapsed and refractory cutaneous melanoma metastases or in-transit disease underwent 100 courses of ECT with intravenous injection of bleomycin. Response to treatment was evaluated three months after ECT. A long-lasting response was defined as no cutaneous or in-transit relapse after a minimum of six months.

## Results

Three months after ECT, a complete response was observed in 29 patients (48.4%), a partial response in 23 patients (38.3%) and no change or progressive disease in 8 patients (13.3%). The objective response rate of all treated lesions was 86.6%. Thirteen patients (44.8% of complete responders) experienced a long-lasting response

to ECT and were disease-free after a mean duration of follow-up of 27.5 months.

## Conclusions

The favorable outcome obtained in the present study demonstrates that ECT is a reliable, and effective procedure that provides long-term benefit in terms of curative and palliative treatment for unresectable cutaneous lesions without adversely impacting the quality of life of patients [3-7].

## Authors' details

<sup>1</sup>Unit of Surgery "Melanoma - Soft Tissues", National Cancer Institute, Naples, Italy. <sup>2</sup>Unit of Medical Oncology, National Cancer Institute, Naples, Italy. <sup>3</sup>Unit of Pathology, National Cancer Institute, Naples, Italy.

Published: 6 May 2014

## References

1. Leon P, Daly J, Synnestvedt M, Schultz DJ, Elder DE, Clark WH Jr: The prognostic implications of microscopic satellites in patients with clinical Stage I melanoma. *Arch Surg* 1991, **126**:1461-68.
2. Marty M, Garbay JM, Gehl J, et al: Electrochemotherapy an easy, highly effective and safe treatment of cutaneous and subcutaneous metastases: results of ESOPE (European Standard Operating Procedures of Electrochemotherapy) study. *Eur J Cancer* 2006, **43**:13.
3. Sersa G, Miklavcic D, Cemazar M, Rudolf Z, Pucihar G, Snoj M: Electrochemotherapy in treatment of tumors. *Eur J Surg Oncol* 2007, **34**:232-40.
4. Quaglino P, Mortera C, Osella-Abate S, et al: Electrochemotherapy with intravenous bleomycin in the local treatment of skin melanoma metastases. *Ann Surg Oncol* 2008, **15**:2215-22.
5. Sersa G, Stabuc B, Cemazar M, Miklavcic D, Rudolf Z: Electrochemotherapy with cisplatin: systemic antitumor effectiveness of cisplatin can be potentiated locally by the application of electric pulses in the treatment of malignant melanoma skin metastases. *Melanoma Res* 2000, **10**:381-85.
6. Kaehler KC, Egberts F, Hauschild A: Electrochemotherapy in symptomatic melanoma skin metastases: intraindividual comparison with conventional surgery. *Dermatol Surg* 2010, **36**:1200-02.

\* Correspondence: u.marone@istitutotumori.na.it

<sup>1</sup>Unit of Surgery "Melanoma - Soft Tissues", National Cancer Institute, Naples, Italy

Full list of author information is available at the end of the article

7. Mozzillo N, Caracò C, Mori S, et al: Use of neoadjuvant electrochemotherapy to treat a large metastatic lesion of the cheek in a patient with melanoma. *J Transl Med* 2012, **10**:131.

doi:10.1186/1479-5876-12-S1-P1

**Cite this article as:** Mozzillo et al.: Long-term response after electrochemotherapy in patients with relapsed or refractory cutaneous melanoma. *Journal of Translational Medicine* 2014 **12**(Suppl 1):P1.

**Submit your next manuscript to BioMed Central  
and take full advantage of:**

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at  
[www.biomedcentral.com/submit](http://www.biomedcentral.com/submit)

