

An evaluation of half-body irradiation in the treatment of widespread, painful metastatic bone disease

Leszek Miszczyk¹, Andrzej Tukiendorf², Aleksandra Gaborek³, and Jerzy Wydmański¹

¹Radiotherapy Department, Maria Skłodowska-Curie Memorial Cancer Center and Institute of Oncology, Gliwice Branch, Gliwice, Poland; ²Cardiff Research Consortium, The MediCentre Heath Park, Cardiff, CF14 4UJ, United Kingdom; ³The Good Compassion Hospice, Gliwice, Poland

ABSTRACT

Aims. Evaluation of analgesic uptake, pain intensity, and quality-of-life changes after half-body irradiation of patients with bone metastases.

Material and methods. Ninety-five patients (97 irradiations) were treated with single half-body irradiation fraction (3-8 Gy). Thirty-three patients had upper-half-body irradiation, 55 lower-half-body irradiation and 9 middle-half-body irradiation. The patients were examined on the day of irradiation, 2 and 4 weeks later, and then once a month. The intake of analgesics, pain level (from 0 to 10), and the quality of life (EORTC QLQ-C30) were evaluated. The fluctuations of pain levels and the particular scaling values of QLQ-C30 during a one-year period were analyzed (Kendall τ correlation).

Results. Over the course of 5 months, the incidence of patients using strong opioids decreased from 43.8% to 33.3%, and the incidence of patients who did not need to resort to analgesics increased from 6.7% to 25%. The mean pain level decreased from 6.1 points (half-body irradiation) to 3.1 points 2 weeks later. An inverse correlation between pain level readings and time was statistically significant. An increase was observed in the values of the five functional scales as reflected on the EORTC QLQ-C30 questionnaire (four of which correlated significantly with the observation time). A similar situation prevailed with respect to global health status. A decrease was observed in most of the values on the symptoms scales; 6 saw a significant decrease, in correlation with the follow-up. Correlations were also found between pain intensity and functionality, and between symptoms scales readings and global health status.

Conclusions. Half-body irradiation of cancer patients suffering from painful multiple bone dissemination is an effective and simple treatment modality that affords significant quality-of-life improvement and pain relief, thus allowing for a reduction in the use of strong analgesics.

Key words: bone metastases, half-body irradiation, quality of life.

Correspondence to: Leszek Miszczyk, Radiotherapy Department, Maria Skłodowska-Curie Memorial Cancer Center and Institute of Oncology, Gliwice Branch, ul. Wybrzeże AK 15, 44-100 Gliwice, Poland.
Tel 48-32-2788001;
fax 48-32-2788001;
e-mail leszek@io.gliwice.pl

Received April 10, 2008;
accepted May 28, 2008.