

Palliative analgesic effect of Re-186 HEDP in various cancer patients with bone metastases

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The clinical picture of bone metastases is manifested by pain and loss of mechanical stability. Standard treatment options for bone metastases include external beam radiotherapy and the use of analgesics. Due to a large number of lesions in many patients, the use of radionuclide therapy with beta emitters may be preferable. Re-186 hydroxyethylidene diphosphonate (Re-186 HEDP) is one of the radiopharmaceuticals suitable for palliative treatment of metastatic bone pain. The aim of this study was to investigate palliative and side effects of Re-186 HEDP in patients with different types of cancers. **Material & Method:** Thirty one (17 male, 14 female) patients with various cancers (10 prostate, 10 breast, 4 rectum, 5 lung, 2 nasopharynx) and bone metastases were included in the study. Therapy was started with a fixed dose of 1295 MBq of Re-186 HEDP. If necessary, the same dose was repeated at least 3 times after an interval of 10–12 weeks; A total of 40 standard doses were given; 6 patients received repeated doses (3 doses in 3 patients, 2 doses in 3 patients). The patients with bone marrow suppression were excluded from the study. The pain relief was assessed the Eastern Cooperative Oncologic Group (ECOG) and the Karnofsky status index. All patients were evaluated with standard evaluation forms filled in daily for a maximum of 10 weeks. **Results:** The mean response rate was 87.5% in patients with breast and prostate cancer, 75% in patients with rectum cancer and 20% in patients with lung cancer. The overall response rate was 67.5%. The palliation period varied between 6 and 10 weeks, with a mean of 8.1 ± 1.3 weeks. The maximal palliation effect was observed between the 3rd and 7th weeks. No serious side effects were seen except mild hematologic toxicity. **Discussion & Conclusion:** It is concluded that Re-186 HEDP is a highly effective agent in the palliation of metastatic bone pain in patients with prostate, breast and rectum cancer, but not effective in lung cancer. On the other hand, Re-186 seems to be a good alternative to Sr-89 because of its preferable physical characteristics (such as short half life and gamma energy emission), low side effect profile, early response and repeatability.

Key words: bone metastases, Re-186 HEDP, pain palliation