

## Journal Watch

### Dexamethasone for the Prophylaxis of Radiation-induced Pain Flare after Palliative Radiotherapy for Symptomatic Bone Metastases: a Phase II Study

**Prepared by:** Firdaus M Mydeen, 24<sup>th</sup> November 2009 presented at the Tertiary Palliative Care Unit, Grey Nuns Hospital

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**Abstract:** Aims: Pain flare occurs in over one-third of patients receiving palliative radiotherapy for bone metastases. A single dose of dexamethasone can decrease the incidence of pain flare during the first 2 days immediately after radiotherapy. We conducted a phase II prospective study to investigate the prophylactic role of prolonged dexamethasone. Materials and methods: Patients with bone metastases treated with a single 8Gy were prescribed 8mg dexamethasone just before palliative radiotherapy and for 3 consecutive days after treatment. Worst pain score and analgesic consumption data were collected at baseline and daily for 10 days after treatment. Analgesic consumption was converted into a total daily oral morphine equivalent dose in the analysis. *Pain flare* was defined (a priori) as a two-point increase in worst pain on an 11-point numeric rating scale compared with baseline with no decrease in analgesic intake, or a 25% increase in analgesic intake with no decrease in worst pain score. To distinguish pain flare from progressive disease, we required that the worst pain score and analgesic intake returned to baseline levels after the increase/flare. Results: Forty-one patients were evaluable (32 men, nine women). Their median age was 67 years. The overall incidence of pain flare was 9/41 (22%) within 10 days after the completion of radiotherapy. Most (55%) of these pain flares occurred on day 5. Absence of pain flare was 34/41(83%) and 39/41 (95%) for days 1-5 and 6-10 after the completion of radiotherapy, respectively. Conclusion: Dexamethasone is effective in the prophylaxis of radiotherapy-induced pain flare after palliative radiotherapy for bone metastases. Randomised studies are needed to confirm this finding. Hird, A. et al. (2009). *Clinical Oncology* 21, 329—335

#### **Strengths:**

Appropriate inclusion and exclusion criteria.

Utilized standard, simple 11-point numeric rating for pain assessment.

“Pain flare” was well defined,

consistent. Approach is replicable in clinical setting.

Assessment tools were used to ensure homogeneity of population studied with regards to pain.

#### **Weaknesses:**

There is no clear graphical comparisons between the group’s incidence study, the pilot single dose dexamethasone and this prolonged dexamethasone study.

This is not a randomized controlled trial.

Weaknesses are reported by the authors, including:

sample may not be representative of entire bone metastasis patient who underwent RT due to criteria and

small sample size due to concomitant steroid use in many cancer patients.

**Relevance to palliative care:** Pain flare is a common phenomenon among our patient population who undergo RT for bone metastasis pain. This article is a continuation of this group’s initial work that has shown reduction of pain flare in the first 2 days with a single dexamethasone dose – where prolonged Treatment results in suppression of flare in the first 4 days.