

Journal Watch

Effect of nebulized morphine in cancer patients with dyspnea: a pilot study.

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Abstract:

Background: It is known that opioids may decrease subjective dyspnea. The recent finding that opioid binding sites are present in the peripheral bronchus supports the possibility of a local action of opioids. However, the clinical benefit of nebulized morphine is controversial. The purpose of this study was to confirm the feasibility of nebulized morphine and to evaluate its clinical benefits.

Patients and Methods: Fifteen cancer patients with dyspnea in the thoracic oncology division and palliative care unit in the National Cancer Center Hospital East were given 20 mg of morphine hydrochloride dissolved in 5ml of normal saline through an ultranebulizer. The subjective effects were evaluated using a visual analog scale (VAS) immediately before and 60 min after inhalation. Respiratory rate (RR), hemoglobin oxygen saturation (SpO₂), and blood pressure also were measured twice at these two time points. A questionnaire about adverse reactions was included.

Results: No major adverse reactions such as respiratory depression, sleepiness, nausea or vomiting were observed. VAS was significantly decreased after nebulization ($p=0.005$) without any significant change in RR or SpO₂. In Eight of 15 patients, dyspnea was improved as measured by a decrease in VAS of more than 10%. This correlated with the desire of the patients to continue its use.

Conclusion: Our preliminary data confirmed the feasibility of nebulized morphine and suggested its possible clinical benefit for dyspneic patients. A randomized controlled study is warranted to exclude a placebo effect and to compare the clinical benefits of nebulized morphine with those of other methods of treatment.

Comments:

Strengths:

Use of several outcome measures

Weaknesses:

Small sample size

Uncontrolled trial

Questionable clinical significance of the reported statistically significant findings

Relevance to palliative care:

This article stands in contrast to several articles published in the 1990's that refuted the earlier claims of superior effectiveness of nebulized morphine for control of dyspnea. At present common clinical practice does not advocate the use of nebulized opioids in the treatment of dyspnea.