

Dissertation Abstract

A PILOT STUDY OF NEBULIZED MORPHINE IN PATIENTS WITH CANCER-RELATED BREATHLESSNESS

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ABSTRACT

Background:

Breathlessness is a common problem in cancer patients of which treatment can be difficult. Nebulized morphine in managing this clinical problem had previously been studied but no information about its clinical effect in Chinese patients was ever reported. This pilot study aims to assess the efficacy and safety of nebulized morphine in a sample of Chinese patients presenting with dyspnea due to advanced malignancy.

Methods:

Twenty one patients who was morphine naïve, were administrated 5 mg morphine sulphate 4 hourly for one day through a nebulizer. Breathlessness was assessed using visual analogue scale (VAS). The respiratory rate (RR), hemoglobin oxygen saturation (SpO₂), heart rate and blood pressure were monitored. Evaluation was made before nebulization and at 24 hours. Those patients found the treatment to be ineffective would be given double dose of nebulized morphine i.e. 10mg given 4 hourly for one day. Similar assessment was performed at 48 hours.

Results:

At 24 hours, VAS of dyspnea was significantly decreased after given 5mg nebulized morphine ($p=0.001$). The RR was significantly decreased ($p=0.042$) but not the SpO₂ ($p=0.06$). Ten patients perceived the 5 mg dose to be helpful in the relief of dyspnea. Eight patients who received dose escalation to 10 mg nebulized morphine had significantly decreased ($p=0.025$) in VAS at 48 hours but not with the RR and SpO₂. Three patients found the 10 mg dose to be beneficial for symptom control. Overall 13 patients (62%) showed a clinical benefit from the nebulization treatment. No severe adverse effect was observed.

Conclusion:

The use of nebulized morphine at a dosage of 5 to 10 mg was well tolerated in this group of Chinese patients with cancer-related breathlessness. There was apparent improvement in dyspnea after the treatment. However, the clinical efficacy has to be further assessed in double-blind placebo-controlled trial with a larger sample size.