

Symptomatic Therapy of Dyspnea with Strong Opioids and Its Effect on Ventilation in Palliative Care Patients

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Abstract :

This is a prospective non-randomised case series of 11 patients to study at the effects of nasal insufflation, morphine and hydromorphone on the following parameters during the titration phase :

- 1) Oxygen saturation
- 2) Carbon dioxide levels
- 3) Respiratory rate
- 4) Sensation and intensity of dyspnea
- 5) Pulse rate

Eleven patients were admitted to the palliative care unit and all received multi-disciplinary management. These patients were selected on the basis of :

- 1) No prior opioid use
- 2) Significantly dyspneic
- 3) No past history of COPD
- 4) No significant heart failure
- 5) No significant pain, although one patient did have pain before the study.

The oxygen saturation, CO₂ blood levels, respiratory rate, dyspnea intensity and pulse rate were monitored transcutaneously by non invasive means with a SenTec Digital Monitor.

As for the results, there was no significant change to the abovementioned parameters with O₂ insufflation but there was significant reduction of dyspnea intensity with opioids and the average respiratory rate decreased as early as 30 minutes after introduction of opioids. This occurred without any change in the blood gases but patients experienced significant relief of dyspnea intensity and decrease in respiratory rate without respiratory depression.

Strengths :

Opioids causing carbon dioxide narcosis is a fear very entrenched in the medical teaching. However, this study seems to indicate that with judicious use, the risk of respiratory depression is probably quite low.

The blood gases could be measured in a non-invasive manner.

Weakness :

Being a non randomized study, it is difficult to attribute the improvement completely to the opioids. Moreover, the patients were only monitored for a total of 2 hours. It would be more important to show that the risk of respiratory depression is low with chronic use of opioids.

Relevance to Palliative Care :

This study serves to show at a more basic science level that the use of opioids is not contra-indicated in palliative patients with dyspnea as long as the opioids are judiciously used.