

Title : The Infusion of Opioids During Terminal
Withdrawal of Mechanical Ventilation
in the Medical Intensive Care Unit

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Reference : J Pain Symptom Manage 2011;42:44e51. _ 2011

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Abstract : Context. Most deaths in intensive care units occur after limitation
or withdrawal
of life-sustaining therapies. Often these patients require opioids to assuage
suffering; yet, little has been documented concerning their use in the
medical
intensive care unit.

Objectives. To determine the dose and factors influencing the use of
opioids
in patients undergoing terminal withdrawal of mechanical ventilation in this
setting.

Methods. Data were prospectively collected from 74 consecutive patients
expected to die soon after extubation. The doses of morphine, effect on
time to
death, and relation of dose to diagnostic categories were analyzed.

Results. The mean (standard deviation) dose of morphine given to patients
during the last hour of mechanical ventilation was 5.3 mg/hour. Patients
dying
after extubation received 10.6 mg/hour just before death. Immediately
before
extubation, the dose correlated directly with chronic medical opioid use
and
sepsis with respiratory failure and inversely with coma after
cardiopulmonary

resuscitation or a primary neurological event. After terminal extubation, the final morphine dose correlated directly with the presence of sepsis with respiratory failure and chronic pulmonary disease. The mean time to death after terminal extubation was 152.7 ± 229.5 minutes without correlation with premorbid diagnoses. After extubation, each 1 mg/hour increment of morphine infused during the last hour of life was associated with a delay of death by 7.9 minutes (P = 0.011).

Conclusion. Premorbid conditions may influence the dose of morphine given to patients undergoing terminal withdrawal of mechanical ventilation. Higher doses of morphine are associated with a longer time to death.

Strengths : Prospective study design,
use of behaviour pain scale in non-verbal patients.

Weakness : Small number of patients
Heterogeneous group of non-cancer patients
Symptom burden of patients pre and post extubation was not clear.

Relevance to Palliative Care : Morphine may have the potential to extend life in the setting of terminal extubation if used at appropriate doses.

It is Important to document the intent of the treatments/interventions in the patients' charts.