Introduction

- Despite evidence-based guidelines, wide variation in sedation schemes and practice are reported in ICUs.
- Our aim was to evaluate the use of sedative drugs, quality of sedation and outcome in patients undergoing mechanical ventilation (MV) in Chile. As a secondary objective we assessed variables involved in mortality.

Methods

- Prospective, observational study during a 10 week period in 13 ICU, involving all adult patients requiring ventilatory support
- Main exclusion criteria were neurologic main disease, previous liver or renal failure, second episode of MV, and expected MV shorter than 48 hours.
- Nurse training was implemented for using a sedation/agitation scale (SAS, Table 1) at 12 h interval, and registering sedative and analgesic drugs and muscle relaxants on a daily basis for the first 7 days, and weekly thereafter.
- Stepwise logistic regression was used to identify variables independently associated with mortality at 28 days.

Results

- We evaluated 635 patients, of which 155 (24%) fulfilled inclusion criteria: 57% male, 60±18 yo, APACHE II 19±6, and SOFA 7.8±3.1.
- Main diagnosis were sepsis 63%, ALI/ARDS 47%, COPD 19%, congestive heart failure 17%, and trauma 9%.
- Ventilatory parameters at 24 hours were Pa/FiO2 225±97, PEEP 7.7±3.1, and VT 7.5±1.7 ml/kg.
- Of 1907 SAS measurements, 55.4% were 1-2 (deep sopor/coma), 37.1% 3-4 (mild sopor/awake) and 7.4% 5-7 (agitation) (Table 1 and Figure 1).
- Midazolam (86%) and fentanil (81%) were the most frequently used drugs (Figure 2).
- Muscle relaxants after intubation were used in 30% by bolus or continuous infusion.
- Mortality at 28 days (35.5%) was independently associated to SOFA scores (p=0.016), medical condition (p=0.004) and use of muscle relaxants (p=0.012).

Discussion

- In Chile, despite recommendations, patients on MV are frequently on deep sedation.
- Midazolam and fentanyl are the preferred drugs, but still 30% of patients use muscle relaxants.
- Our findings support the use of protocols to improve quality of sedation and outcome of patients on MV.