In this cohort of patients, the bolus administration of propofol was frequently not documented, potentially placing some patients at risk of drug-related toxicity” McGain et al 92019).

Abstract:

BACKGROUND: Although propofol is widely used for sedation in intensive care units around Australia, evaluation of bedside nursing practices of the administration of propofol have been limited. We investigated whether there was a discrepancy between the amount of propofol delivered by the infusion pump and that recorded electronically and consequently patient exposure to avoidable harms.

AIMS: The aim of this research was to compare the total amount of propofol administered to intensive care patients via a programmable infusion pump with that documented in the electronic medical record (EMR). Secondary objectives were to ascertain the percentage of 1) patients exposed to a propofol dose greater than recommended and 2) daily energy requirements administered as propofol infusion.

METHODS: This was a prospective, observational study of total propofol delivered to 50 patients in a 14-bed metropolitan, Australian intensive care unit. Infusion pump data and entries from the EMR were collated.

RESULTS: Propofol sedation was administered for a median 18 (interquartile range: 14-47)
hours with median total propofol 3025 mg (interquartile range: 1840-7755 mg) by pump and 3250 mg (interquartile range: 1915-6960 mg) by EMR, i.e. 1.9 (interquartile range: 1.3-2.3) mg/kg/hour by pump (correlation coefficient = 0.99). The total bolus propofol documented in the EMR was a median 330 mg (interquartile range: -838 to -124) less than the pump amount. Nineteen (38%) patients had no EMR-documented propofol boluses yet had received at least one bolus via the pump. In two of 50 (4%) patients, the pump propofol infusion dose was above the recommended maximum safe dose of 4 mg/kg/h.

CONCLUSION: In this cohort of patients, the bolus administration of propofol was frequently not documented, potentially placing some patients at risk of drug-related toxicity. Further research to develop and implement strategies to improve the documentation of propofol administration is indicated.

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