

ORAL PRESENTATION

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# Efficacy and safety of procedural sedation with propofol in a country with a young emergency medicine training program

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## Background

In The Netherlands emergency medicine is a relatively new specialty. The aim of this study was to evaluate the effectiveness and safety of procedural sedation with propofol by newly trained Dutch emergency physicians.

## Methods

A prospective observational cohort study of emergency department patients undergoing procedural sedation at two teaching hospitals. Primary outcomes were serious adverse events, sedation events and efficacy. A standardized protocol and data collection form was used at both sites.

## Results

386 patients were enrolled over 18 months. The median age was 57 (IQR 38-70) years, 55% were male. All had ASA class score  $\leq 3$ . Indications for procedural sedation were reduction of dislocations (52%), electro-cardioversion (32%), fracture reduction (9%) and abscess/wound treatment (6%). The median propofol dose was 1.0 mg/kg (0.70-1.5) and 44% also received fentanyl; median dose 1 mcg/kg (0.6-1.3). Most had a Ramsay sedation score of 4 or 5 (54%). The procedural success rate was 99.5%. No serious adverse events were reported. Sedation events included; hypoventilation (11%), desaturation (5%), hypotension (3%) and bradycardia (1%), all of which resolved with simple supportive interventions. One patient vomited without aspirating. Increased age ( $p = 0.001$ ) and high Ramsey score ( $> 3$ ) ( $p = 0.024$ ) were the only significant predictors of events. Gender, weight, total dose of propofol, use of fentanyl and type of procedure were not independent risk factors for any event.

## Conclusion

Procedural sedation with propofol can be performed safely and effectively by newly trained Dutch emergency physicians. Increased age and high Ramsay scores were the only risk factor for sedation events. All events were minor and responded to simple interventions. Possibly this study can aid the introduction of procedural sedation with propofol by emergency physicians in other countries where emergency medicine is a new and upcoming specialty.

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