

TITLE: OUTCOMES OF PROCEDURAL SEDATION AND ANALGESIA IN PAEDIATRIC EMERGENCY DEPARTMENT IN HOSPITAL TUNKU AZIZAH

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Introduction

Paediatric patients frequently presented to the emergency department (ED) experiencing pain, fear, and anxiety stemming from acute injuries or illnesses. The unfamiliar setting, coupled with essential diagnostic procedures and interventions, can escalate their distress. Consequently, the implementation of procedural sedation and analgesia (PSA) within paediatric ED is imperative to mitigate these adverse experiences. Extensive prior research consistently demonstrates the safety and efficacy of PSA administration in paediatric populations in ED accompanied by close monitoring, anticipation of potential adverse events, precise medication selection and dosing, and adherence to strict PSA selection and discharge protocols.

Objectives

The objective of this study is to examine the outcomes of PSA conducted in paediatric only ED in Hospital Tunku Azizah (HTA), by determining the success rate of PSA, the rate of adverse events, and to identify association of adverse events and its risk factors.

Methodology

This study was a retrospective, single-center, descriptive analysis carried out in the paediatric ED of HTA, Kuala Lumpur. Complete enumeration method was used. Data of every PSA conducted from January 1st, 2020 to October 31st, 2020 were extracted from patient medical records.

Results

A total 280 cases were analysed in this study. This study found out that the success rate of paediatric PSA was 98.2%, vomiting is the most common adverse event which is 7.1%, others were urticaria (0.7%) and asymptomatic premature ventricular contractions (0.4%). There was no serious adverse event, significant intervention and unplanned hospitalizations. The ED revisit rate within 72 hours post PSA was 5.7%, all attributed to the complication of cast applied

during the procedure. The most common medication used for paediatric PSA was intravenous ketamine 62.9% as a sole agent followed by a combination of intravenous ketamine and intravenous fentanyl (20.4%) subsequently intranasal fentanyl (4.6%). However, there was no statistically significant association of adverse events of PSA and its risk factors was found in this study.

Conclusion

With the findings of high success rates and low non sentinel adverse events, this study concluded that PSA conducted in paediatric ED of HTA was safe and effective.

Keywords

Paediatric Procedural Sedation and Analgesia, Paediatric Emergency Department