



ORIGINAL ARTICLE

Preparation of sedation–analgesia procedures in Spanish paediatric emergency departments: A descriptive study^{☆,☆☆}

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KEYWORDS

Sedation–analgesia procedures;
Paediatric emergencies;
Multicentre study;
Monitoring;
Informed consent

Abstract

Introduction: The objective of this study was to describe the current practice regarding the preparation of the sedation–analgesia (SA) procedures performed in the paediatric emergency centres in Spain.

Material and methods: A multicentre, observational and prospective analytical study was carried out on the SA procedures that were performed on children under 18 years old in 18 paediatric emergency departments between February 2015 and January 2016.

Results: A total of 658 SA procedures were registered in 18 hospitals of Spain, most of them to children older than 24 months. The type of the procedure was: simple analgesia in 57 (8.6%), sedation in 44 (6.7%), SA for a not very painful procedure in 275 (41.8%), and SA for a very painful procedure in 282 (42.9%). Informed consent was requested in 98.6% of the cases. The written form was more frequently preferred in the group of patients that received SA for a very painful procedure (76.6%) in comparison to a painful procedure or to simple analgesia (62.9% and 54.4%, respectively, $p < .001$). The staff that most frequently performed the SA procedures were the paediatricians of the emergency departments (64.3%), followed by paediatrics residents (30.7%). The most frequent reasons for the SA were traumatological (35.9%) and surgical (28.4%). Fasting was observed in 81% of the cases. More than two-thirds (67.3%, $n = 480$) children were

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monitored, the majority (95.8%) of them using pulse oximetry. The pharmacological strategy used was the administration of one drug in 443 (67.3%) of the cases, mostly nitrous oxide, and a combination of drugs in 215 (32.7%), especially midazolam/ketamine (46.9%).

Conclusion: The majority of the SA procedures analysed in this study have been carried out correctly and prepared in accordance with the current guidelines.

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PALABRAS CLAVE

Procedimientos de sedoanalgesia;
Urgencias pediátricas;
Estudio multicéntrico;
Monitorización;
Consentimiento informado

Preparación de los procedimientos de sedoanalgesia en los servicios de urgencias pediátricos españoles: estudio descriptivo

Resumen

Introducción: El objetivo de este estudio fue describir la práctica clínica actual de la preparación de los procedimientos de sedoanalgesia (SA) realizados en servicios de urgencias pediátricas (SUP) españoles.

Material y métodos: Estudio multicéntrico, observacional y analítico prospectivo de los procedimientos de SA realizados a niños menores de 18 años en 18 SUP entre febrero del 2015 y enero del 2016.

Resultados: Se registraron 658 procedimientos de SA en 18 hospitales de España, la mayoría (90,7%) en mayores de 24 meses. El tipo de procedimiento fue: 57 (8,6%) analgesia simple, 44 (6,7%) sedación, 275 (41,8%) SA para procedimiento poco doloroso y 282 (42,9%) SA para procedimiento muy doloroso. Se solicitó consentimiento informado al 98,6%, siendo más frecuentemente escrito en el grupo de SA para procedimientos muy dolorosos (76,6%) que en procedimientos poco dolorosos o en analgesia simple (el 62,9 y el 54,4%, respectivamente, $p < 0,001$). El personal que más frecuentemente realizó la SA fueron los pediatras de urgencias (64,3%), seguidos de los residentes de pediatría (30,7%). Los motivos de la SA más frecuentes fueron los traumatológicos (35,9%) y quirúrgicos (28,4%). El ayuno se valoró en el 81%. Se monitorizaron 480 (73%) niños, la mayoría de ellos con pulsioxímetro (95,8%). La estrategia farmacológica utilizada fue la administración de un fármaco de forma aislada en 443 (67,3%) de los casos, siendo más frecuente el óxido nitroso (50%) y una combinación de fármacos en 215 (32,7%), destacando la combinación midazolam/ketamina (46,9%).

Conclusión: La mayoría de los procedimientos de SA analizados en este estudio han tenido una preparación correcta y acorde a las recomendaciones actuales.

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Introduction

Pain and fear of pain cause a great part of the suffering experienced by children when they visit a health care facility. Both may be present in the child on arrival to the facility, or may be caused or elicited by the diagnostic or therapeutic procedures required by the patient.^{1,2}

Pain must be managed safely and effectively, regardless of age, maturity or severity of disease for physiological, moral, humane and ethical reasons.³⁻⁵ Furthermore, it is known that untreated pain has physiological and psychological consequences, increasing the pain associated with future procedures.⁶

Until recent years, the management of pain and anxiety in children was one of the most neglected aspects of care in paediatric emergency departments (PEDs) due to the very nature of emergency care, in which time is a critical factor.⁷ However, in the past few years there has been a growing interest among paediatric emergency physicians in providing adequate sedation and analgesia (SA) to their patients.²

Today, the need for sedation and analgesia is considered indisputable. It is also understood that the correct management of SA and patient safety during its administration require not only the identification of the need for SA, but also adequate training of the staff that delivers SA to minimise and correctly address its risks.^{3,4} Thus, adequate staff training and protocol development are crucial to the safety of paediatric patients.⁴

In 2009, the Working Group on Analgesia and Sedation of the Sociedad Española de Urgencias de Pediatría (Spanish Society of Paediatric Emergency Medicine [SEUP]) developed the first manual on analgesia and sedation in the paediatric emergency setting, followed by the introduction in 2015 of a nationwide register of SA procedures performed in Spanish PEDs.

Objective

The aim of our study was to analyse the preparation of SA procedures in 18 PEDs in Spain, and to find out

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