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ORIGINAL RESEARCH ARTICLES

Procedural sedation and analgesia: Auditing the practice at Steve Biko Academic Hospital Emergency Centre from May to October 2014

Sédation et analgésie d'intervention: audit de la pratique au centre des urgences de l'hôpital universitaire Steve Biko de mai à octobre 2014

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Introduction: Procedural sedation and analgesia (PSA) is a vital skill for physicians working in an emergency centre (EC). For doctors working in the African setting, dealing with high patient loads and limited theatre availability, knowledge and proficiency in PSA is a highly valuable and necessary skill. The aim of this study was to audit the practice of PSA in the EC of Steve Biko Academic Hospital.
Methods: This was a cross-sectional descriptive audit. Procedures conducted under PSA were identified. An audit of clinical notes and interviews with staff was conducted. Data were analysed using the STAT 12 package. The results were presented as adherence statistics with reference to the PSA guidelines of the Emergency Medicine Society of South Africa (EMSSA).
Results: This audit indicated that documentation of informed consent prior to PSA was poor in this hospital's EC. No evidence of informed consent was found in any audited cases. Adherence to the other aspects of PSA was also fairly average (below 50% in most). The mean adherence scores for these components were as follows: pre-procedure preparation and equipment check 46.19% (95% CI 36.62–55.76), documented patient pre-evaluation 50.99% (95% CI 46.78–55.18), monitoring during procedure 39.22% (95% CI 34.68–43.75), post procedure monitoring 37.99% (95% CI 32.78–43.20), and overall documentation of procedure 40.69% (95% CI 37.85–43.52). Analysis of adherence to the guidelines between different ranks of doctors demonstrated that the registrars in EM were, in general, more compliant.
Conclusions: This audit identified documentation of informed consent as a major shortcoming in the practice of PSA in this EC. There is also room for improvement in most of the other aspects that were assessed. As part of the clinical audit cycle, the results of this study will be used to initiate changes to increase adherence to the guidelines.

Introduction: La sédation et l'analgésie d'intervention (SAI) est une compétence vitale chez les médecins travaillant en centre des urgences (CU). Pour les médecins travaillant en Afrique, gérant un grand nombre de patients et une disponibilité limitée des salles d'opération, la connaissance et la familiarisation avec la SAI est une compétence extrêmement précieuse et nécessaire. L'objectif de cette étude était d'auditer la pratique de la SAI au sein du CU de l'hôpital universitaire Steve Biko.
Méthodes: Il s'agissait d'un audit descriptif transversal. Les procédures effectuées dans le cadre de la SAI ont été identifiées. Un audit des notes cliniques et des entretiens avec les membres du personnel ont été réalisés. Les données ont été utilisées en utilisant le logiciel STAT 12. Les résultats ont été présentés sous forme de statistiques de respect, en référence aux directives sur la SAI de la Société sud-africaine de médecine urgentiste (Emergency Medicine Society of South Africa (EMSSA).
Résultats: Cet audit a indiqué que la documentation du consentement éclairé avant la SAI était de mauvaise qualité dans le CU de cet hôpital. Aucune preuve de consentement éclairé n'a été trouvée dans aucun des cas audités. Le respect des autres aspects de la SAI était également relativement médiocre (inférieure à 50% dans la plupart des cas). Les notes de respect moyennes pour ces composantes étaient telles suit: préparation et vérification du matériel avant la procédure, 46,19% (IC à 95% 36,62–55,76), examen préliminaire documenté du patient, 50,99% (IC à 95% 46,78–55,18), suivi pendant l'intervention, 39,22% (IC à 95% 34,68–43,75), suivi suite à l'intervention, 37,99% (IC à 95% 32,78–43,20), et documentation globale de l'intervention, 40,69% (IC à 95% 37,85–43,52). L'analyse du respect des directives entre différents niveaux de médecins a montré que les registres en MU étaient généralement plus en conformité.
Conclusions: Cet audit a identifié le consentement éclairé comme une lacune majeure de la pratique de la SAI dans ce CU. La plupart des autres aspects évalués peuvent également être améliorés. Dans le cadre de ce cycle d'audits cliniques, les résultats de cet étude seront utilisés afin d'initier des changements visant à augmenter le respect des directives.

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African relevance

- Knowledge and skill in procedural sedation and analgesia is useful in a resource limited setting.
- Procedures under procedural sedation and analgesia in the emergency centre may eliminate the need for theatre.
- Emergency centres should regularly audit the safety of their procedural sedation and analgesia practice.

Introduction

Procedural sedation and analgesia (PSA) is a vital skill for any physician working in an emergency centre (EC). Previously known as conscious sedation, the term PSA in now preferred.[1] It is the technique of using drugs to induce a state where a patient will tolerate noxious stimuli, while maintaining his or her own cardio-respiratory function without invasive support and monitoring.[2] The practice of emergency medicine often requires performing painful and anxiety producing procedures. In addition to reducing the pain and anxiety associated with these procedures, PSA also frequently facilitates the successful and timely completion of the procedure.[3] PSA is now internationally accepted as a rapid turnaround emergency physician-led service. PSA is a core competency in emergency medicine (EM) and a daily part of EM practice.[4] The EC is a unique environment where patients present on an unscheduled basis, often with complicated problems. These may require urgent interventions to proceed simultaneously. Examples include fracture/dislocation reductions, complex suturing, electrical cardioversion, intercostal drain insertion as well as diagnostic procedures.

In South Africa, as in many low-resource settings, high patient loads, as well as long waiting times for theatres and specialists, are a common occurrence. This necessitates that many procedures be conducted in the emergency centre and thus, PSA has become a critical component of care in our ECs.[5] A study by Hodkinson et al. [6] published in 2009 demonstrated the many shortcomings of PSA in ECs in Cape Town. This questionnaire-based study enquired directly about the PSA practises of doctors and nursing unit managers. It was conducted in both government and private ECs. The authors postulated that the findings of their study were in all likelihood representative of the practise in ECs in the rest of South Africa. As a consequence of this study the following recommendations were made to improve PSA in ECs in South Africa:

1. Development of general protocols for PSA in ECs,
2. Training of doctors and nurses at all levels, and
3. Optimisation of EC facilities and staffing.

Shortly after this, the Emergency Medicine Society of South Africa (EMSSA) published guidelines regarding PSA in emergency centres in 2010.[5,7] These PSA guidelines suggest the current best practice or standard of care. Their goal is to improve the standard of PSA being conducted in South African ECs.[5] Important aspects of these guidelines include: pre-procedure evaluation of the patient, monitoring during and after procedure, documentation of procedure, equipment and staff required as well as types of medications recommended.[7]

Methods

This was a cross-sectional descriptive study; it was conducted in the EC of Steve Biko Academic Hospital (SBAH). This tertiary academic facility provides emergency care to the residents of the greater Tshwane District, a population of approximately three million people. The number of patients treated in the EC is on average, 26,000 per annum. EC patients are selected through a triage process with a high level of acuity and hence a greater need for EC procedures. The EC serves as the referral hospital for most of Northern Gauteng and parts of Mpumalanga.

The aim of this study was to audit the practice of PSA in the EC of SBAH against the EMSSA PSA guidelines. The objectives were to assess adherence to the guidelines paying special attention to the following: informed consent, pre-evaluation of the patient, monitoring during and after the procedure, equipment and medications used, staff availability as well as the documentation of the procedure.

A clinical audit should be followed by changes designed to improve conformity with the standards and then by re-evaluation to demonstrate such improvement[8]; that was the goal of this study.

All PSAs conducted on adult patients for major joint/fracture reductions and intercostal drain insertions in SBAH EC by fulltime EC doctors were included. These procedures were chosen as they are the most commonly conducted under PSA in this unit. It also ensured easy identification of the files. Fulltime doctors working at this institution include registrars in emergency medicine, medical officers (MO) of varying experience as well as community service medical officers (CSMO).

Children under the age of 18 years were not considered due to difficulties in obtaining informed consent and because our audit focused on PSA in adults. Sessional doctors were not included as they were not readily available to interview and represent a small minority of doctors working in our setting.

Cases were identified on a daily basis by consulting the patient register as well as the schedule drug register. Once identified, the investigator conducted an extensive audit of the patient's notes. A data collection sheet, in the form of a tick sheet, was compiled using the EMSSA PSA guidelines as a template. The data collection sheet was broken up into a number of different components consisting of various elements (Table 1). Information recorded in the patient's notes regarding the different elements of the guidelines was marked off on the check sheet. In addition to this, an interview was conducted with the member of nursing staff who assisted in the procedure. A semi-structured interview was conducted in a private room using the same data collection sheet as a template. During this interview, elements of the PSA that may have been carried out but were not clearly documented in the notes were identified. This interview was conducted within 48 h to overcome any potential for recall bias. The study was designed to reduce the potential of the Hawthorne effect, i.e., doctors conducting PSA were not influenced by researchers directly observing or questioning them whilst performing the PSA. Data were collected over a six-month period between May and October 2014.

Data were captured on an Excel spreadsheet. Most of the data were descriptive in nature. The different components