ORIGINAL ARTICLE

Factors influencing pain management by nurses in emergency departments in Central Africa

Rasoloherimampiononiaina M Rampanjato, Mukarugwiza Florence, Ndimubanzi C Patrick, Brendan T Finucane

Emerg Med J 2007;24:475–476. doi: 10.1136/emj.2006.045815

See end of article for authors' affiliations

Correspondence to: R M Rampanjato, Service d'Anesthésiologie, CHUK, BP 655 Kigali, Rwanda; mpanjato@yahoo.com

Accepted 10 April 2007

Objective: To observe pain management practices by nurses in emergency departments (EDs) in Central Africa and to study the various factors influencing these practices.

Methods: Time to first analgesic treatment was recorded in 53 patients presenting to the ED of a Central African hospital in February 2005. A survey was simultaneously conducted on the attitudes and commitment of nurses towards the management of pain. All 28 nurses assigned to the ED agreed to participate in the survey.

Results: Severity of pain was the factor most influencing the time to first analgesia following admission to the ED. Severe pain was assessed as a score of ≥ 7 on a 1–10 visual analogue scale. The median time to first analgesia in patients with severe pain was 150 min, which was considerably longer than in patients without severe pain ($p=0.003$). A quarter of the 28 nurses had no official training in pain management and most ($>80\%$) were unable to carry out a formal assessment of pain. The majority ($>90\%$) were confident of their ability to treat pain. Thirteen (48%) were of the opinion that cultural factors influenced their management of pain and 67% admitted that they had some fears about administering morphine to patients in the ED.

Conclusion: Pain management by nurses in the ED in Central Africa is inadequate. Cultural factors greatly influence how nurses manage pain in the emergency room. Patients would benefit considerably if nurses received additional education about the diagnosis and management of acute pain in EDs in Central Africa.

Acute pain management by nurses is a particular challenge in Central Africa, especially in the emergency department (ED).¹ The purpose of this study was to observe pain management practices by nurses in an ED in Central Africa and to study the various factors influencing the administration of analgesics (opioids and non-steroidal anti-inflammatory drugs (NSAIDs)).

METHODS

This observational study was conducted February 2005 in the ED of a large city hospital in Central Africa and consisted of two sections. First, the time from admission to the ED until the patient received either an opioid or an NSAID was recorded. The factors potentially influencing the actual time that patients received analgesia included the severity of the pain experienced, the time of day/night, the age of the patient, the mechanism of injury and the cause of injury. These factors were statistically analysed. A score ≥ 7 on a 1–10 visual analogue scale (VAS) was chosen to represent severe pain. A total of 53 patients were involved in this section of the study. These were patients who had sustained a soft tissue or bony injury who were not being admitted to the hospital but who would be subsequently discharged home from the ED at the discretion of the nurse. Pain medication prescriptions were written by a physician, but the nurse decided when and how much of the medication to administer.

The second part of the study was a questionnaire consisting of five specific questions concerning the attitudes and commitment of emergency room nurses towards the management of pain. The questions required a yes or no answer, and the nurses were given an opportunity to add comments.

The questions in the survey were as follows:

1. Did you receive training in pain management during your nursing studies at the nursing institute?

2. Are you capable of assessing acute pain?
3. Did you learn how to manage acute pain during your training?
4. Do you feel that cultural factors influenced your attitude towards pain management?
5. Are you for any reason afraid to administer morphine or other opioid compounds to patients?

This questionnaire was issued to the 28 trained nurses assigned to the ED of a large city hospital in Central Africa in February 2005. All completed the survey.

RESULTS

The results of the first part of the study are summarised in table 1.

Severity of pain most influenced the time that patients received the first analgesic. Patients with a VAS score of ≥ 7 received their analgesic medication at 150 min (median), which was significantly longer than for those who had pain scores of <7 .

All 28 nurses assigned to the ED during the specified period completed the survey. The results are summarised in table 2.

More than 90% of the nurses were confident of their ability to treat pain in the ED. More than 80% admitted to being unable to properly assess pain, 67% admitted to fears about administering morphine and approximately 50% thought that cultural factors influenced how they managed patients suffering from acute pain in the emergency room.

DISCUSSION

This two-part observational study confirms the authors' impression that pain management in EDs in Central Africa is poorly handled by nurses and the results of the survey suggest some reasons for this.

Table 1 Association between waiting time and potential influencing factors

Factor	n	Waiting time (min)				p Value
		Median	Min	Max	Mean rank	
Pain						
Presence of severe pain	15	150.0	20.0	990.0	31.00	0.003
Absence of severe pain	38	30.0	10.0	270.0	16.87	
Time of day/night						
Night duty	31	55.0	10.0	860.0	22.55	0.076
Day time	22	140.0	20.0	990.0	30.16	
Child/adult status						
Child patient	14	145.0	20.0	660.0	28.54	0.663
Adult patient	39	120.0	10.0	990.0	26.45	
Injury mechanism (bone/soft tissue injury)						
Soft tissue injury	25	120.0	10.0	990.0	26.90	0.964
Bone injury	28	120.0	20.0	480.0	27.09	
Context						
Act of violence/not act of violence						
Not act of violence	51	120.0	10.0	990.0	26.42	0.192
Act of violence	2	307.5	180.0	435.0	41.75	
Fall/not fall						
Not fall	42	120.0	10.0	990.0	27.48	0.660
Fall	11	105.0	20.0	480.0	25.18	
Road accident/other accident						
Other accident	17	180.0	20.0	860.0	31.56	0.138
Road accident	36	105.0	10.0	990.0	24.85	

Table 2 Confidence in pain management among the 28 emergency department nurses

	n	% (95% CI)
Trained in pain management	21	75 (55.10 to 89.30)
Can assess pain	5	18 (6.10 to 36.90)
Can treat pain	26	93 (76.50 to 99.10)
Are influenced by cultural background	13	48 (28.70 to 68.10)
Are afraid to administer morphine	19	68 (47.60 to 84.10)

The study has some weaknesses. The first section was not randomised and information was gathered on patients who were experiencing significant pain, although we would have preferred to gather data on all patients admitted to the ED during February 2005. Despite this, we believe that the information presented helps confirm previous impressions that pain management by nurses in EDs is a real problem in Central Africa.² A VAS score of 7 was chosen to represent severe pain in accordance with the opinion of most acute pain specialists.³ Higher pain scores would be considered to be intolerable. Ideally we would have liked to have information about the timing of the doctors' verbal or written prescription for pain medication, but this information was difficult to obtain from the records. However, time of admission to the ED and time of analgesic administration were well documented. The survey confirmed that lack of education on pain management was a serious problem in nursing training programs.

The survey also confirmed the impression that cultural factors influenced how pain was managed in the ED.⁴ Nurses thought that the administration of opioids caused addiction in patients. A significant number of nurses also believed that taking medication for pain was a sign of weakness, that pain was an expected consequence of injury and that pain relief could interfere with healing. Those in charge of nursing

training need to dedicate much more time to educating nurses about all aspects of acute pain management.⁵ Because of the shortage of doctors and overcrowding in EDs⁶ nurses should, with proper education, be allowed to prescribe analgesics for patients in the ED.⁷

CONCLUSIONS

Pain management by nurses in the ED in Central Africa is inadequate and greatly influenced by cultural factors. Patients would benefit considerably if nurses received additional education about the diagnosis and management of acute pain in EDs in Central Africa.

Authors' affiliations

Rasolherimampioniaina M Rampanjato, Service d'Anesthésiologie, CHUK, Kigali, Rwanda

Mukarugwiza Florence, Service des Urgences, CHUK, Kigali, Rwanda

Ndimubanzi C Patrick, Service de Pédiatrie, CHUK, Kigali, Rwanda

Brendan T Finucane, Department of Anesthesiology and Pain Medicine, University of Alberta, Edmonton, Alberta, Canada

Competing interests: None declared.

REFERENCES

- 1 **Fenwick C**. Assessing pain across the cultural gap: Central Australian Indigenous peoples' pain assessment. *Contemp Nurse* 2006;**22**(2):218-27.
- 2 **Brown CA**, Richardson C. Nurses' in the multi-professional pain team: a study of attitudes, beliefs and treatment endorsements. *Eur J Pain* 2006;**10**(1):13-22.
- 3 **MCW Research Foundation**. Severe pain. <http://www2.edc.org/lastacts/archives/archivesJan01/severepain.pdf> (accessed 1 May 2007).
- 4 **McGrath P**. 'The biggest worry...': research findings on pain management for Aboriginal peoples in Northern Territory, Australia. *Rural Remote Health* 2006;**6**(3):549.
- 5 **Atallah F**, Guillemin Y. [Man and his pain: anthropological and social dimension]. *Ann Fr Anesth Reanim* 2004;**23**(7):722-9.
- 6 **George S**, Read S, Westlake L, et al. Evaluation of nurse triage in a British accident and emergency department. *BMJ* 1992;**304**(6831):876-8.
- 7 **Karwowski-Soulie F**, Lessenot-Tcherny S, Lamarche-Vadel A, et al. Pain in an emergency department: an audit. *Eur J Emerg Med* 2006;**13**(4):218-24.