ABSTRACT

Background & Aim: Most common complaint of patients admitting in the emergency department (ED) is acute pain and inadequate pain management places them at risk of oligoanalgesia. The aim was to assess the efficacy of acute pain management secondary to trauma.

Methods: The survey was conducted during May 2011 in the ED of Sree Balaji Medical College Hospital, Chennai. Conscious and oriented patients aged >12 yrs presenting to the ED with pain secondary to trauma of any kind except head injury and without any psychiatric illness were included in this study. Patients with absence of pain, pain lasting for > 3 months, acute life threatening disease or injury requiring immediate transfer to the ICU or operating room, altered mental state, Neuropsychiatric disorder, language barrier and refusal to participate were excluded from the study. Severity of pain using Numerical rating scale [NRS] at time of admission, half an hour after analgesia administration and at the time of discharge from ED, type of analgesia administered, time of analgesia and patient's satisfaction regarding pain management were recorded meticulously. With the acquired data, the results were.

Results: Out of 150 patients included in the study, 60 had NRS of ≤ 3 and 90 had 8 – 9. Among 60 patients who had NRS of < 3, all had NRS of < 2 at half an hour after administration of Diclofenac and among 90 who had NRS of 8 – 9, 76 had > 5 and 14 had < 5. At the time of discharge, patients who initially had NRS of ≤ 3, all patients had NRS < 1 and among patients who initially had NRS of 8 – 9, 72 had >5.

Conclusions: Diclofenac, the most commonly used analgesic in the ED is inefficient in the management of moderate to severe pain.

Keywords: Emergency Department, Pain management, Trauma.

INTRODUCTION

Most frequent and common complaint of patients admitting in the emergency department (ED) is acute pain (1, 2, 3, 4). This can be due to various causes, the most common being trauma. Managing this acute pain to patient’s satisfaction is a major challenge for the health care providers. Inadequate management of pain in the ED places the patient at risk of oligoanalgesia (2, 3, 4). Various studies have been done which prove that acute pain is under treated in the ED (3, 5, 6). In India, this scenario is more adverse due to lack of specific guidelines for the initial assessment of pain and is optimal management in many ED’s. To overcome the errors in pain assessment, various tools are used like Visual Analogue Scale [VAS], Numerical rating scale [NRS], McGill’s pain questionnaire etc (3, 5, 6). Amongst these, the NRS is very practical and reasonably accurate and most commonly used (6).

We have done a survey on pain management in the ED of a tertiary care hospital. In this survey we have assessed the efficacy of acute pain management secondary to trauma in the ED.

MATERIALS AND METHODOLOGY

Study Design:-
A prospective and analytical study.

Study Setting and Population:-
The survey was conducted the Emergency Medical Officer and the assisting interns in the ED of a tertiary care hospital: Sree Balaji Medical College and Hospital, Chennai, Tamilnadu.

Period:-
May 2011.

Inclusion criteria:-
- Age >12 yrs, either sex male or female.
Patients without any psychiatric illness.
• Pain secondary to trauma of any kind except head injury.
• Patient should be conscious and oriented.

Exclusion criteria:-
• Absence of pain.
• Pain lasting for > 3 months.
• Acute life threatening disease or injury requiring immediate transfer to the ICU or operating room.
• Altered mental state.
• Neuropsychiatric disorder.
• Language barrier.
• Refusal to participate.
• Known allergy to NSAIDS

The survey was conducted by the CMO and the assisting interns of Sree Blaaji Medical College and Hospital.

Methods:-
The patients presenting to ED and who were included in the study, the following data was recorded.
• Patient details: name, age, sex, registration number.
• Cause of pain: wound/abrasion/contusion/fracture pain/spine/others.
• Severity of pain using a Numerical Rating Scale at time of admission: mild (1-3)/moderate (4-6)/severe (7-10).
• Type of analgesia administered.
• Time of analgesia.
• NRS half an hour after administration of analgesia.
• NRS at the time of discharge from the casualty.
• Patient satisfaction regarding pain management at the time of discharge from the casualty (good/satisfactory/less satisfactory/bad).

With the acquired data, the results are analyzed to study the efficacy of acute pain management in the ED.

RESULTS
Out of 150 patients included in the study, 60 patients had numerical rating scale [NRS] of ≤ 3 and 90 patients had NRS of 8 – 9. Among 60 patients who had NRS of < 3, all had NRS of < 2 half an hour after administration of Diclofenac. After half an hour of Diclofenac administration among 90 who had NRS of 8 – 9, 76 had NRS > 5 and 14 had NRS < 5. At the time of discharge, patients who initially had NRS of ≤ 3, all patients had NRS < 1. At the time of discharge among patients who initially had NRS of 8 – 9, 72 had NRS > 5 and 18 had NRS < 5, and 60 patients had less satisfactory pain management, 18 had satisfactory and 12 had bad satisfaction regarding pain management [Figure 1].

DISCUSSION
Oligoanalgesia continues to be a large problem in the ED. An attitude of suspicion, a culture of ignoring the problem and an environment that is not conducive to change in practice combine to the present formidable obstacles for effective pain management in the emergency setting (3).

From the above survey it is evident that acute pain management secondary to trauma in the ED is not optimum. Overall amongst the 150 patients assessed, in 54.66% of the patients pain management was not satisfactory. And amongst those who reported their NRS scores > 5, 91% of the patients reported their pain management as unsatisfactory.

From this survey it can be conclusively said that the analgesic used most commonly i.e. Diclofenac is
inefficient in the management of moderate to severe pain in the ED.

In this study we have not taken into account the ethnic, cultural and gender differences in the expression, reporting and expectations for treatment of pain. Also in this study Diclofenac was the sole analgesic used, we need to assess the management of pain using other easily available analgesics like opioids and paracetamol.

Therefore further research, education and training is essential for the effective assessment and management of pain in the emergency department.

REFERENCES

1. Oligoanalgesia in the emergency department: short – term beneficial effects of an education program on acute pain. Departments of anesthesiology (Decosterd, Blanc). Emergency medicine (Hugli, Yersin), Orthopedics and Traumatology (Mouhsine), Surgery (Givel), and Division of clinical Pharmacology and Toxicology (Buclin), University Hospital of Lausanne, Lausanne, Switzerland; and the Department of cell biology and Morphology, Faculty of Biology and Medicine, University of Lausanne, Lausanne, Switzerland (Decosterd). Annals of emergency medicine. Volume 50, no.4: October 2007.


3. Changing Attitudes About Pain and Pain Control in Emergency Medicine. David E. Fosnocht, MD*, Eric R. Swanson, MD, MS, Erik D. Barton, MD. Division of Emergency Medicine, University of Utah School of Medicine, 1150 Moab Building, 175 North Medical Drive, East Salt Lake City, Utah 84132, USA.

