UNDER-ANALGESIA AND TIME FROM TRIAGE TO ADMINISTRATION OF ANALGESIA AT THE EMERGENCY DEPARTMENT

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Background

Pain is one of the most common presenting symptoms among Emergency Department (ED) attendees. Pain management traditionally depends on a doctor's prescription, which can be influenced by long waiting times and arrival of acutely ill patients.

Previous studies have demonstrated that pain is not managed effectively in the ED setting. Lim et al. (2006) found that time to delivery of analgesia in the ED fell short of patient's expectations and only 32.3% of the patients received analgesia in the ED. Similarly, Ducharme et al. (2008) concluded that patients with severe pain experienced lengthy delays to administration of initial analgesics in the ED. Delay in administration of analgesia could potentially lead to overcrowding in the ED as patients could not be discharged on a timely basis.

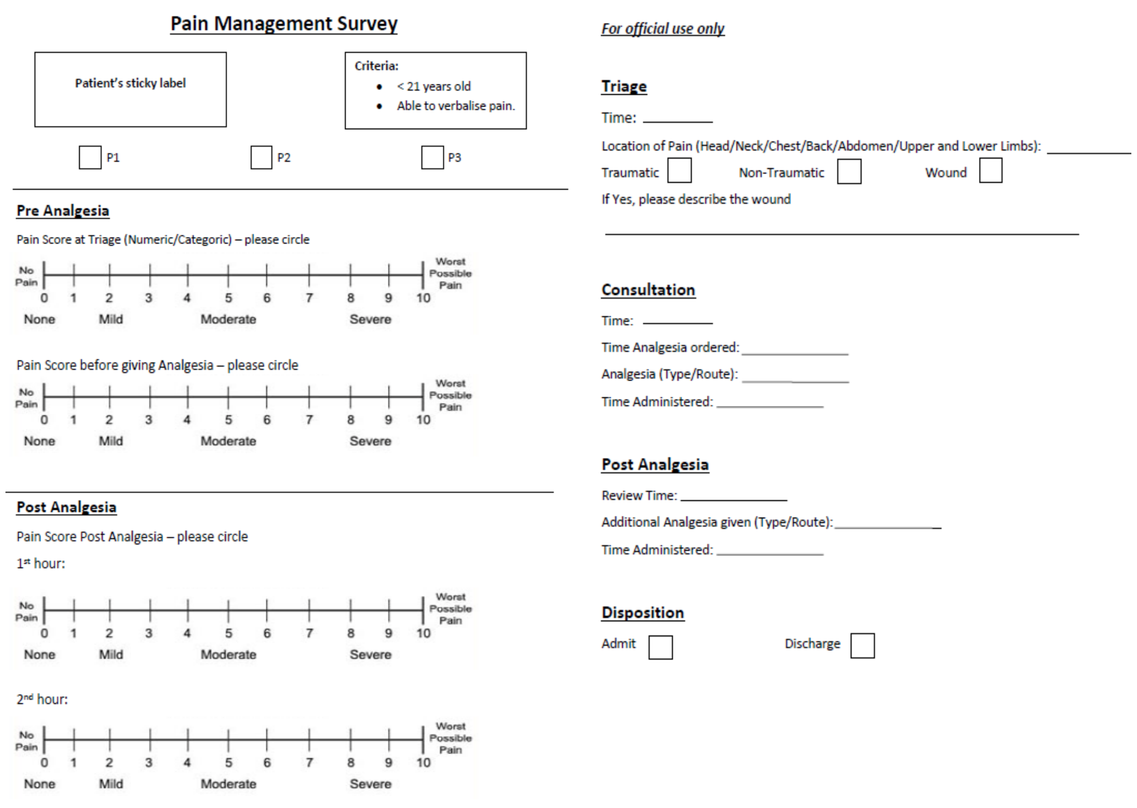
Various initiatives to improve the management of pain in ED had been reported. However, the initiatives differed in terms of analgesics and cut-off pain scores. Goh et al. (2007) reported that an emergency triage nurse initiated pain management protocol resulted in better pain management; the mean time interval for analgesia given by triage nurse was 2.5 minutes while that for doctors was 68.2 minutes; with no adverse drug reactions observed. Similarly, Fosnocht and Swanson (2006) found that a triage pain protocol resulted in a reduction in mean time to medication administration from 76 minutes to 40 minutes.

Aims

To determine the time taken from triage to administration of analgesia among patients presenting to the Singapore General Hospital Emergency Department (SGH ED) with traumatic pain; and assess the effectiveness of pain management in the SGH ED.

Method

An observational prospective cohort study was done in SGH ED for 6 months. Convenience sampling was done on patients with traumatic pain, ≥ 21 years of age and able to verbalise pain. Data was collected on pain intensity at various intervals from triage till discharge .EMERGE electronic medical record system was used to extract data on patient's demographics, triage status, time to administration, type of analgesics, and time of discharge.



Pain Management Survey

Patient's sticky label

Criteria:
- < 21 years old
- Able to verbalise pain.

☐ P1 ☐ P2 ☐ P3

Pre Analgesia

Pain Score at Triage (Numeric/Categoric) – please circle

No Pain 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Pain
None Mild Moderate Severe

Pain Score before giving Analgesia – please circle

No Pain 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Pain
None Mild Moderate Severe

Post Analgesia

Pain Score Post Analgesia – please circle

1st hour:

No Pain 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Pain
None Mild Moderate Severe

2nd hour:

No Pain 0 1 2 3 4 5 6 7 8 9 10 Worst Possible Pain
None Mild Moderate Severe

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Triage

Time: _____

Location of Pain (Head/Neck/Chest/Back/Abdomen/Upper and Lower Limbs): _____

Traumatic ☐ Non-Traumatic ☐ Wound ☐

If Yes, please describe the wound

_____

Consultation

Time: _____

Time Analgesia ordered: _____

Analgesia (Type/Route): _____

Time Administered: _____

Post Analgesia

Review Time: _____

Additional Analgesia given (Type/Route): _____

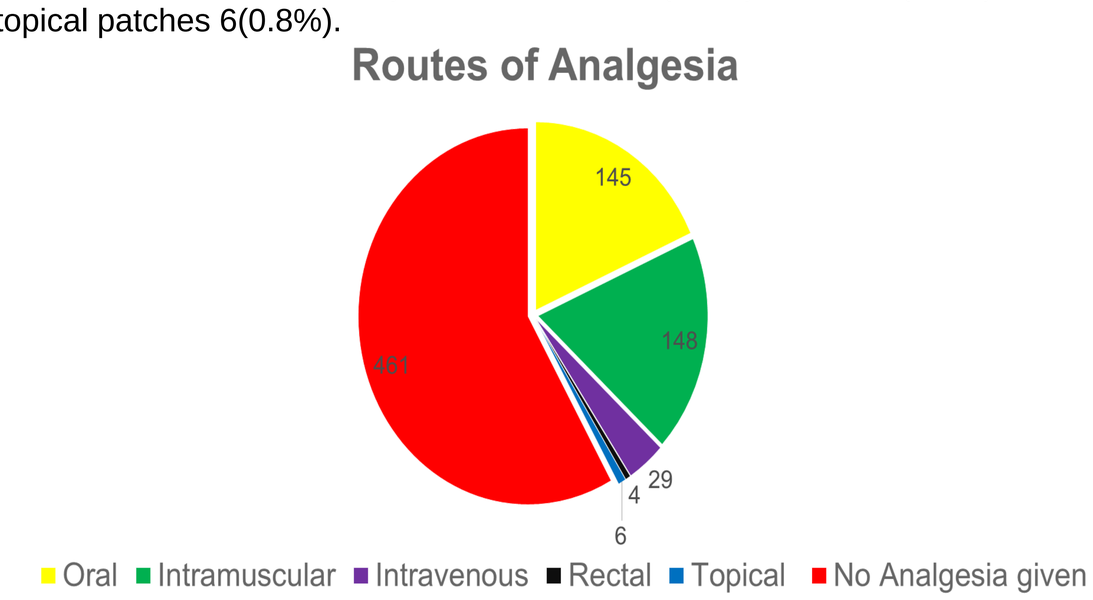
Time Administered: _____

Disposition

Admit ☐ Discharge ☐

Results

A total of 793 patients were recruited. 52.5% (n=416) were males and 54.7% (n=434)were Chinese, 18.9% Indians, 15.8% Malays and 10.0% made up of others. The mean pain score at triage was 5.7 (SD=±2.2) and 41.9% (n=332)of the patients received analgesia during their ED visit. Analgesia was administered through several routes; oral 145 (18.3%) intramuscular 148 (18.7%), intravenous 29(3.7%) rectal 4(0.5%) and topical patches 6(0.8%).



The mean pain score at discharge was 2.6 (SD=±2.4).The mean time difference from triage to administration of first analgesia was 109.2 minutes (SD=±59.8). Shorter waiting time for analgesia was associated with shorter ED stays (P<0.01), however we did not find an association between waiting time for analgesia and final pain scores.

Conclusion

This study showed that SGH ED took more than an hour to administer the first analgesia from triage and 58% of patients did not receive any documented analgesia. This showed that under-analgesia is a problem and there is a need to identify barriers to optimal pain care within the ED.

From the results, we can conclude that there was an overall reduction in pain score from the time at triage(mean=5.7) to the point of discharge(mean=2.6); However, there was no correlation with waiting time for analgesia and pain relief. Through our study, we also found that shorter waiting time for analgesia leads to shorter total ED time but we cannot predict shorter time from analgesia to discharge.

Both Goh et al. (2007) and Fosnocht and Swanson (2006) have reported that their ED have benefited from a triage nurse initiated analgesia protocol and waiting time for analgesia have been reduced. We suggest that a nurse initiated analgesia protocol should be implemented in the SGH ED and this study to be repeated thereafter to review on the effectiveness of the protocol.

References

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