INTRODUCTION
The most frequent reason for presentation to an Emergency Department is pain.1 Even with the increasing knowledge of pathophysiology of pain and development of advanced modalities for treating pain, acute pain management is a major challenge for many hospitals and high proportion of patients still have significant pain in the peri-operative period.2-5 Inadequate patient analgesia for acute conditions, both in the Accident and Emergency department and following admission have previously been documented.6-8 The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) was established in January 2001. In the JCAHO guidelines, examples of implementation include the addition of pain as the “fifth” vital sign to be noted in the context of initial assessment; the use of pain intensity ratings; and posting of a statement on pain management in all patient care areas.9

ABSTRACT
Objective: To evaluate the adequacy of pre-operative analgesia and patient’s satisfaction at the accident and emergency department, in terms of pain relief.
Study Design: Observational study.
Place and Duration of Study: The Accident and Emergency Department (A&E) of Civil Hospital, Karachi, during April and May, 2007.
Methodology: Patients presenting with acute abdomen or trauma were included. Visual Analogue Scale (VAS) was used to grade severity of pain. Pain at presentation, analgesic prescribed, post-analgesic residual pain and patient satisfaction were assessed.
Results: A total of 166 patients (109 males and 57 females) were enrolled in the study. It included 98 (59%) cases of trauma and 68 (41%) patients with acute abdomen. Mean pain score was 6.95±2.03 on VAS. Female patients (p=0.008) and patients with acute abdomen (p<0.001) experienced significantly more pain as compared to male and trauma patients respectively.
Analgesics were prescribed to 104 (62.7%) patients. Post-analgesic mean residual pain score was 5.0±1.8. Out of them, 47.1% patients waited to be given more analgesia. There was significant less prescription of analgesic to patients with acute abdomen (52.9%) as compared to trauma patients (26.5%) (p=0.001). Overall, more than half of the patients (59.6%) were not satisfied with the pre-operative analgesic treatment in the A&E department.
Conclusion: Pre-operative analgesia was underprescribed and pain was undertreated in accident and emergency department resulting in more than half patients being not satisfied.

Key words: Pre-operative analgesia. Emergency. Trauma. Acute abdomen. Patient satisfaction.
the A&E department was used to grade severity of pain. Level of pain was characterized by mild (0-3), moderate (4-6) and severe (7-10). Pain was assessed at presentation, and two hours post-analgesia as residual pain. Adequacy of pre-operative analgesia means that once inside the hospital, patient should be made comfortable in respect of pain management, not feeling any pain and not wanting more analgesia. Analgesic prescribed, patient’s wishes for having more analgesia and patient satisfaction with pain relief were also assessed. Satisfaction was assessed at 2 hours post-analgesia by asking satisfaction with pain treatment in terms of yes or no.

Data was analysed by SPSS version 10. Mean pain scores of patients at presentation and 2 hours post-analgesia were analyzed by unpaired t-test between genders and trauma/acute abdomen. Analgesia given or not given in trauma patients and non-trauma patients was analyzed by Chi-square test. Level of significance was taken at 0.05.

RESULTS

A total of 166 patients (109 males and 57 females) were included in the study with a mean age of 33.2±10.2 years. Rating was between 16-52 years. There were 98 (59%) trauma and 68 (41%) patients of acute abdomen. Mean pain score of all patients at presentation was 6.9±2.0. Female patients experienced significantly more pain (mean=7.5±1.9) as compared to male patients (mean=6.6±2.0, p=0.008). Patients with acute abdomen have significantly higher pain score (mean=7.56) as compared to trauma patients (mean=6.5±2.1, p<0.001, Table I).

Analgesics were prescribed to 104 (62.7%) patients. Post-analgesic mean residual pain score of all patients was 5.0±1.8. This score was less in trauma patients (mean=4.7±1.9) as compared to acute abdomen patients (5.7±0.9, p=0.005, Table II). About half of the patients (n=49, 47.1%) said they should be given more analgesia for pain relief.

<table>
<thead>
<tr>
<th>Patients</th>
<th>At presentation</th>
<th></th>
<th>P-value</th>
</tr>
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<tbody>
<tr>
<td>All patients (n=166)</td>
<td>6.9 ± 2.0</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Males (n=109)</td>
<td>6.6 ± 2.0</td>
<td>0.008</td>
<td></td>
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<tr>
<td>Females (n=57)</td>
<td>7.5 ± 1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trauma (n=98)</td>
<td>6.5 ± 2.1</td>
<td>0.001</td>
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</tr>
<tr>
<td>Acute abdomen (n=68)</td>
<td>7.5 ± 1.6</td>
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Un-paired t-test was used to test significant difference

<p>| Table II: Mean pain scores of post-analgesic residual pain. |
|----------------|----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Patients</th>
<th>Post-analgesic residual pain</th>
<th></th>
<th>P-value</th>
</tr>
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<tbody>
<tr>
<td>All patients (n=104)</td>
<td>5.0 ± 1.8</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Males (n=62)</td>
<td>5.0 ± 1.8</td>
<td>0.82</td>
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<tr>
<td>Females (n=42)</td>
<td>5.1 ± 1.7</td>
<td></td>
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</tr>
<tr>
<td>Trauma (n=72)</td>
<td>4.7 ± 1.9</td>
<td></td>
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</tr>
<tr>
<td>Acute abdomen (n=32)</td>
<td>5.7 ± 0.9</td>
<td>0.005</td>
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</tbody>
</table>

Un-paired t-test was used to test significant difference

Sixty two patients in whom analgesics were not given, most of them (n=43, 69.4%) had severe pain. Interestingly, there was significant less prescription of analgesics to acute abdomen patients (47.1%) as compared to trauma patients (73.5%, p=0.001, Table III). Overall, more than half of the patients (n=99, 59.6%) were not satisfied with analgesic treatment given in the accident and emergency department.

DISCUSSION

Inadequate pain control, apart from being inhumane, may result in increased morbidity and mortality. One of the primary roles of doctors in the emergency department is the assessment and treatment of pain. Inadequate pain relief has been shown to have a significant impact on the patients’ satisfaction with the care they received prior to surgery. This is perhaps the first study from Pakistan about pre-operative analgesia in the emergency department. It was found that the majority of surgical patients who presented to A&E department had moderate to severe pain. Pain relief was not adequate even in patients who were given analgesics. One reason is that the only analgesic available in the emergency department of the study setting is an NSAID, injection Diclofenac Sodium. If patient requires more potent analgesia then it should be purchased by the patient from pharmacy outside the A&E department, which many patients cannot afford.

In an un-blinded study, female patients tended to report the severity of pain higher than males did and received more pain medications.

One interesting fact is that acute abdomen patients received less analgesia as compared to trauma patients. A possible reason is the belief in old surgical tradition that the use of analgesics should be withheld from patients with acute abdominal pain until a diagnosis and management plan have been established by a surgeon. This belief was emphasized by Cope in his extremely influential book, ‘Early Diagnosis of the
Acute Abdomen. Cope claimed that analgesia would mask signs and symptoms, delay diagnosis, and lead to increased morbidity and mortality.\(^{17}\) Analgesia was withheld in most of the patients with acute abdomen in this study until the concerned surgical team had made their diagnosis and decision for operation was taken. This resulted in undue delay in the management of pain, which was the patients’ main complaint. Recent evidence favours appropriate use of analgesia that can effectively decrease pain to a greater degree than it does the localization of tenderness, while possibly even facilitating the ability to make an accurate diagnosis.\(^{18,19}\)

This study showed increase analgesic prescription and better pain control of trauma patients as compared to other patients with acute abdomen. This finding is similar to a study by Aisuodionoe-Shadrach, et al.\(^8\) Most of the trauma patients had fractures that were splinted and limb elevated, thus augmenting analgesic and reducing their experience of pain. It has also been shown that trauma elicits a greater awareness of pain control among health-care personnel, resulting in prescription of larger doses of analgesics.\(^{20}\)

More than half of the patients to whom analgesia was prescribed still suffered from severe pain. For obvious reasons, less than half the patients were satisfied with their pain management in the A&E department. Morgan-Jones et al., showed that 63% of patients in the emergency department have pain that is unbearable without analgesia, and 36% of patients would have liked more pre-operative analgesia.\(^{12}\)

An Acute Pain Service (APS) has an important role to play in training and supervising acute pain management in the postoperative period.\(^{21}\) Civil Hospital, Karachi lacks an APS but it was started in some hospitals in the private sector.\(^{22}\) It is recommended that APS should be started at all public hospitals and its role can be extended to include supervision of pre-operative analgesia as well. This will definitely improve the quality of patient care available.

There were some limitations of this study. The dose of analgesia patients actually received was not assessed. Also time interval between patient entry to A&E department and analgesic given were not assessed. This study showed the picture of a public sector teaching hospital. There may be some difference in the private hospitals where more resources are available.

Early and appropriate pain relief for patients is humane and should be considered as part of the initial management of every patient with pain. This can be addressed with improved information and education for both medical and nursing staff who were making value judgements regarding the need for analgesics. It has been shown that pain management may improve with just a few hours of focused teaching.\(^{23}\) It is important to address analgesia prescribing habits as well as the use of adjuvant treatment measures so that patients receive the analgesia that they require in the pre-operative period.

**CONCLUSION**

Pre-operative analgesia was underused for surgical patients in the A&E department. This reflected in more than half of the patients being not satisfied with the quality of care in this regard.

**REFERENCES**


