Letter to the Editor

Bull Emerg Trauma 2014;2(4):170-171.

Bulletin of Emergency And Trauma

Acute Trauma Pain Control Algorithm

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Received: July 22, 2014
Accepted: August 10, 2014

Keywords: Acute trauma; Pain Control; Algorithm.

Please cite this paper as:
Paydar S, Farhadi P, Ghaffarpasand F, Taheri A, Farbood A, Dabiri GR, Ghahramani Z, Bolandparvaz S, Abbasi HR. Acute Trauma Pain Control Algorithm. *Bull Emerg Trauma*. 2014;2(4):170-171.

Dear Editor,

Trauma is a major cause of mortality throughout the world but in recent years, major advances have been made in the management of trauma which has been reduced mortality [1].

Pain management and control is a critical part of trauma care. In the recent 3 decades, there has been a growing interest in pain management of trauma patients following some studies which showed that these patients are generally under medicated leading to less desirable outcomes of hospitalization [2,3]. Study of Alpen *et al*., [4] showed that uses of nonopioid drugs should be considered in all trauma patients and is good for patients sustaining trauma and being discharged within 24 hours. In a study showed that uses of opioids analgesia like morphin will improve pain relief for postoperative pain management and is effective and has efficacy before anesthesia [5,6].

Since the major complaint in the patients with multiple rib fracture or long bone fracture is having severe pain while breathing or coughing or even during body movements, rapid control of the pain results in decreased systemic complications and complications of pulmonary system related to pain such as decreased ventilatory effort leading to hypoxia or development of atelectasis and pneumonia.

Currently there is a great controversy in providing a clear protocol for managing pain in trauma patients. In this regards we would like to share our experience of pain control in trauma patients with rib fracture or long bone fractures in a level I trauma center in southern Iran (Shiraz). We encountered several problems with patient's satisfaction and undesirable outcome of hospitalization mostly due to improper pain control in emergency department (ER), although primary and secondary surveys were performed properly.

Until recently, over a period of time based on a review of the literature and experiences of our experts in the center, clear protocols with detailed pathways were designed in order to meet the needs. The protocol (Figure 1) being used in our center for pain control of the adult trauma patients with rib fracture or long rib fractures and GCS>13 consists of three lines of therapy. In the first and second lines, acetaminophen and opiate agents are our preferences because these agents are easily administered with no need for highly experienced staff. Due to limitations of surgical interventions like higher costs or the invasive nature of these procedures, inability to perform for

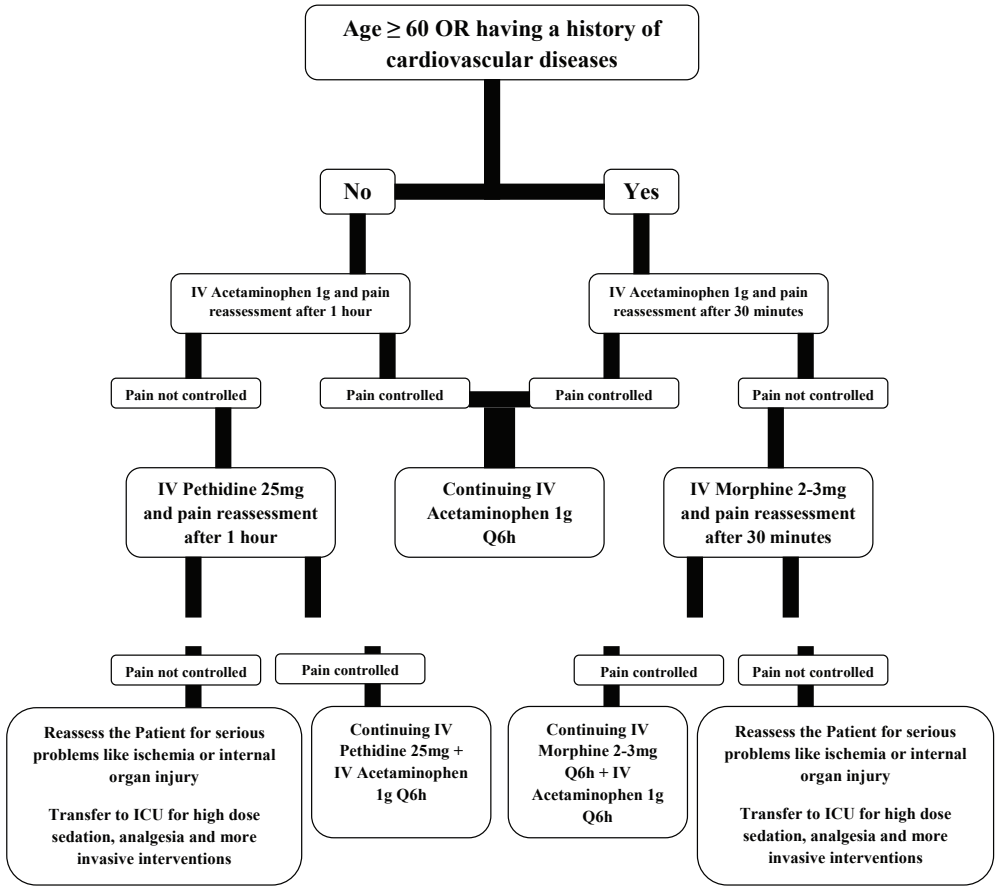

Fig. 1. The protocol for pain control of the adult trauma patients with three or more unilateral rib fractures and GCS>13 in our level I trauma center

cases with no response to no response to intravenous medication, we were made to leave the local nerve block as the last line of pain control. While utilizing the current pain management protocol in the last and recent year, our center did not experience any cases of hypotension, respiratory depression and decreased level of consciousness in trauma patients as a direct result or side effect of analgesic administration. Our experiment also supports the data for prompt initiation of pain control in trauma patients. We observed that the sooner the pain is controlled effectively; the sooner the patients will recover from complaint, getting back to their life and having less work days missed. Moreover the number of patients complaining of chronic pain and discomfort after discharge has decreased and after being discharged from the hospital their response to routine analgesic agents will increase. Overall, the number of patients undergoing nerve blockade for pain control in our center is dramatically lower than that of being reported in the literature.

Finally, it should be taken into consideration that in the area of pain control each modality has its unique character with different advantages and disadvantages. It seems that there is still no absolute superior modality for pain control of trauma patients and each center considering its own priorities should define clear algorithms for step by step management of various trauma patients.

Conflict of Interest: None declared.

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