

32. Implementation of a multimodal analgesia protocol in a burn patient in the emergency department

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Introduction: Survival post-severe burn has increased significantly, and prognosis is not limited to survival or functionality, but extends to ensuring a pain-free quality of life. Pain management is one of the most crucial challenges in the care of severely burnt patients and includes pharmacological and non-pharmacological methods.

Methods: Pain management report of a burn patient in the emergency department.

Results: A 37-year-old male patient was admitted to the emergency department with hands, lower extremities, perineum and lower abdomen burns, after an explosion of a tank and leakage of steam and chemicals. The burn injury of partial thickness occupied about 25% of the total body surface. During the initial ABCDE assessment no life-threatening condition was found and attention was focused on pain management (reported VAS score 10). Wet gauges were applied to the burn area and paracetamol 1 gr, morphine 10 mg (in increments), pethidine 100mg, ketamine 60 mg, dexamethasone 8 mg, parecoxib 40 mg and midazolam 3 mg were administered intravenously, without significant improvement. A PCA pump with simultaneous continuous infusion and on-demand boluses of a solution of morphine, ketamine, lidocaine and midazolam was used, resulting in pain improvement (VAS score 5/10). Analgesia with PCA and systemic administration of paracetamol was continued in ward, where the patient stayed for 24 hours steadily improving (VAS score 4/10). On the 2nd day decision was made to transfer the patient to a specialised burn centre.

Conclusions: Burn pain is complex and unpredictable, with features of nociceptive, psychogenic and neuropathic pain, including a strong element of hyperalgesia. Unfortunately, despite recognizing the importance of analgesia in the management of burns, such patients are often undertreated in the emergency department. Continuous pain reassessment and recording and the application of individualized multimodal analgesia protocols are required, with emphasis placed on the use of PCA pumps in a monitored care unit.