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Effect of oral clonidine on pain reduction in patients with opioid use disorder in the emergency department: A randomized clinical trial

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Abstract

Aims: Pain can create physical and psychosocial discomfort. Pain management of patients with opioid misuse history can be challenging, in part due to their tolerance to opioids. Clonidine is an alpha-2 agonist that has been used for the reduction of anxiety and pain. The aim of this study was to investigate the effect of oral clonidine on pain outcomes in patients with a history of opioid use disorder presenting with orthopaedic fractures in the emergency room.

Methods: In this blinded clinical trial in the emergency department, 70 opioid-dependent patients with orthopaedic fractures were divided into a control group of 35 and an intervention group of 35 subjects. Initially, 0.2 mg of oral clonidine was given to the intervention group and the control group received placebo tablets. Pain levels were recorded based on the Numerical Rating Scale rating before intervention, at 30 min, 1 h after intervention and at disposition from the emergency room (3-6 h after intervention). The total morphine requirement was also recorded.

Results: The pain score of the clonidine group was significantly lower than that of the control group at 1 h and at disposition time. The amount of morphine required was significantly reduced in the clonidine group ($P < 0.05$). Oral clonidine had no significant effect on pulse rate. Oral clonidine was more effective for pain reduction in lower limb injuries.

Conclusion: Oral clonidine significantly reduced pain and the need for morphine in opioid-dependent patients with orthopaedic fractures.

Keywords: clonidine; morphine; opium; orthopaedic; pain management.

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