



## ORIGINAL ARTICLE

# Does a history of psychoactive substances abuse play a role in the level of pain of the patient with severe trauma? ☆



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### KEYWORDS

Pain;  
Multiple trauma;  
Drug users

### Abstract

**Objective:** To analyse the influence of psychotropic substance use on the level of pain in patients with severe trauma.

**Design:** Longitudinal analytical study.

**Scope:** Intensive Care Unit (ICU) of Trauma and Emergencies.

**Patients:** Severe trauma, non-communicative and mechanical ventilation >48 h. Two groups of patients were created: users and non-users of psychotropic substances according to medical records.

**Interventions:** Measurement of pain level at baseline and during mobilisation, using the Pain Indicator Behaviour Scale.

**Variables:** Demographic characteristics, pain score, sedation level and type and dose of analgesia and sedation.

**Results:** Sample of 84 patients, 42 in each group. The pain level in both groups, during mobilisation, showed significant differences  $p=0.011$ , with a mean of 3.11 (2.40) for the user group and 1.83 (2.14) for the non-user group. A relative risk of 2.5 CI (1014–6163) was found to have moderate/severe pain in the user group compared to the non-user group. The mean dose of analgesia and continuous sedation was significantly higher in the user group:  $p=.032$  and  $p=.004$  respectively. There was no difference in bolus dose of analgesia and sedation with  $p=.624$  and  $p=.690$  respectively.

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**Conclusions:** Patients with a history of consumption of psychoactive substances show higher levels of pain and experience a higher risk of this being moderate/severe compared to non-users despite receiving higher doses of analgesia and sedation infusion. Key words: pain, multiple trauma, drug users.

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## PALABRAS CLAVE

Dolor;  
Traumatismo múltiple;  
Consumidores de drogas

## ¿Influyen los antecedentes de consumo de sustancias psicótropas en el nivel de dolor del paciente con traumatismo grave?

### Resumen

**Objetivo:** Analizar la influencia del consumo de sustancias psicótropas en el nivel de dolor de los pacientes con traumatismo grave.

**Diseño:** Estudio analítico longitudinal.

**Ámbito:** Unidad de Cuidados Intensivos (UCI) de Traumatismos y Emergencias.

**Pacientes:** Traumatismo grave, no comunicativo y ventilación mecánica > 48 h. Se crearon 2 grupos de pacientes: consumidores de sustancias psicótropas y no consumidores según historia clínica.

**Intervenciones:** Medición del nivel de dolor en situación basal y durante la movilización, mediante la escala de conductas indicadoras de dolor.

**Variables:** Características demográficas, puntuación de dolor, nivel de sedación y tipo y dosis de analgesia y sedación.

**Resultados:** Muestra de 84 pacientes, correspondiendo 42 a cada grupo. El nivel de dolor en ambos grupos, durante la movilización, muestra diferencias significativas  $p=0,011$ , con una media de 3,11 (2,40) para el grupo de consumidores y 1,83 (2,14) para el grupo de no consumidores. Se objetiva un riesgo relativo (RR) de 2,5, IC (1,014–6,163) de tener dolor moderado/grave en el grupo de consumidores respecto al de no consumidores. La dosis media de analgesia y sedación continua es significativamente mayor en el grupo de consumidores:  $p=0,032$  y  $p=0,004$ , respectivamente. No hay diferencia en la dosis de bolos de analgesia y sedación con  $p=0,624$  y  $p=0,690$ , respectivamente.

**Conclusiones:** Los pacientes con antecedentes de consumo de sustancias psicótropas muestran mayor nivel de dolor y tienen más riesgo de que este sea moderado/grave respecto a los no consumidores, a pesar de recibir mayor dosis de analgesia y sedación continua.

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## Introduction

The incidence of mental disorders in intensive care units (ICU) is little established and its effect on critical disease or the need for specific care is not well known.<sup>1</sup> The use and/or abuse of psychoactive substances is a mental disorder that can result in addiction, dependence and tolerance.<sup>2</sup> This condition poses a difficult challenge for safe and successful pain, agitation and delirium management in critical patients. On the one hand, these patients are physically dependent, due to forced abstinence, sudden discontinuation or rapid reduction of doses, combined on the other hand with the phenomena of tolerating or adapting to drugs they are given from the same family as those they consume; opiates and benzodiazepines in particular. In addition, possible interactions with other drugs or medications must also be taken into consideration, if consumption has been recent.<sup>3,4</sup>

Road traffic accidents are the most common aetiology of trauma; they are for the most part linked to human behaviour, and the consumption of substances that alter behaviour constitutes a risk factor for trauma of all types.<sup>5</sup> A great many serious trauma cases caused by road traffic accidents involve the consumption of one or more psychoactive substances, such as alcohol or drugs.<sup>5,6</sup> The national serious trauma registry RETRAUCI<sup>7</sup> highlights that in up to 27.9% of cases it is clinically suspected or confirmed by analytical tests, focussing primarily on acute consumption. Authors such as Suchyta et al.<sup>8</sup> have researched substance dependence, from a chronic perspective, and also highlight their association with trauma.

Furthermore, pain commonly develops in ICU; it can be baseline, caused by the patient's situation, and can occur when care procedures are carried out.<sup>9</sup> It has negative implications for the patient's outcome.<sup>10-12</sup> The current clinical

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