

COMPARISON OF THE EFFECTIVENESS OF ANALGESICS IN CONTROLLING PAIN IN PATIENTS WITH TRAUMA IN THE HEAD AND NECK REGION

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Abstract: Trauma is a serious public health problem, it is among the main causes of morbidity and mortality and its treatment shows a large proportion of injuries concentrated in the head and neck regions. Pain in trauma victims is present in up to 90% of cases, being the main complaint of patients, whose inadequate management causes damage such as increased blood pressure, heart and respiratory rates, worsening the patient's condition. This study aims to compare the effectiveness of dipyron or paracetamol and tramadol in controlling pain in patients with head and neck trauma. A Visual Analogue Scale was used to measure pain intensity; upon admission, 24, 48 and 72 hours after the patient's hospitalization; adequacy of analgesia was assessed using the Pain Management Index (IMD) and analgesic effectiveness of medications. 100% of patients reported pain upon hospital admission; 27.78% mild pain, 61.11% moderate pain and 11.11% severe pain. The average IMD indicated 37% adequate and 63% inadequate analgesia, suggesting oligoanalgesia and undertreatment of pain. Dipyron was effective in reducing pain intensity by 29% and not effective in 63% of the intervals analyzed, tramadol was effective in 67% and not effective in 37% of the intervals, allowing us to conclude that pain management in patients exposed to trauma in the head and neck region is a challenge, and it is important to measure pain intensity through pain assessment scales routinely, as well as using analgesia protocols to offer effective analgesia to all patients.

Keywords: Trauma. Pain assessment. Analgesia. Dipyron. Tramadol.

INTRODUCTION

Trauma is among the main causes of morbidity and mortality in developed countries, representing in some studies 7.4% to 8.7% of emergency care (ZAMBONI et al., 2017; GASSNER et al., 2004).

The number and severity of head and neck injuries have increased significantly. It is important to highlight that even in other regions suffering injuries and/or trauma, injuries in the head and neck region are very important due to the physical, aesthetic, functional and psychological sequelae that the traumatized patient suffers (MENEZES et al., 2007, PHAN- DANG et al., 2014).

A retrospective study showed that 39.8% of injuries in patients admitted for trauma care were concentrated in the head/neck and face regions (CALIL et al., 2008).

McCaffery and Pasero (2001) stated that pain is recognized as one of the main consequences of trauma and its repercussions are considered potentially harmful to the body.

A study conducted by Calil, Pimenta and Birolini (2007), which evaluated pain in trauma victims, identified its presence in 90% of cases.

According to Khosa et al. (2019), pain is the main complaint of trauma patients. Added to the stress of changing routine, pain can cause major psychological anxiety disorders, therefore adequate control of the patient's pain condition is of great importance in the patient's treatment.

One of the main reasons for discomfort reported by patients is in-hospital pain, which is associated with delayed recovery and increased hospital stay (APFELBAUM et al., 2003).

Pain is defined as an unpleasant sensory and emotional experience associated with actual or potential tissue injury, or described in terms of such injury (INTERNATIONAL

ASSOCIATION FOR STUDY OF PAIN, 1994). Silva et al. (2016) reported that acute pain can cause changes in blood pressure, temperature, heart rate, decreased oxygen supply to tissues and impairment in activities of daily living.

According to Viveiros et al. (2018), inadequate pain management can cause damage such as increased blood pressure, heart rate and respiratory rate, which results in a worsening of the patient's condition.

According to Calil and Pimenta (2005), adequate assessment, control and relief of pain must constitute a vital part of immediate assistance to the injured person.

Although common, little attention has been given to traumatized patients in terms of pain control. The main reasons cited in the literature as the cause of the diversion of attention to immediate priorities, aiming to protect the patient and preserve their vital functions, often unjustifiably transfer the problem of pain to a secondary or non-existent level (CALIL et al., 2008).

Although pain assessment is subject to a subjective component, there are several instruments that are used for this purpose. In this context, a one-dimensional instrument widely used in pain control research is the visual analogue scale (VAS), which uses a straight line of 10 centimeters numbered from "0" to "10", with "0 being absence of pain" and "10 unbearable pain" (INTERNATIONAL ASSOCIATION FOR STUDY OF PAIN, 1994; MARTINEZ, GRASSI, MARQUES, 2011; FORTUNATO et al., 2013).

FORTUNATO et al. (2013) stated that to use the visual analogue scale (VAS), there must be visual contact between the patient and the scale and they must be able to point or signal to the examiner the level of their pain. The scale can be presented simply, in a ruler format, or it can have a visual appeal with colors, but it is important that the patient

understands that one end indicates “no pain” and the other indicates “maximum pain”.

In an observational, cross-sectional and prospective study, conducted by Ortega-Zufiría et al. (2021), regarding the prevalence of pain in patients admitted to the Neurosurgery Service of a Tertiary University Hospital in Madrid/ESP, the existence of protocols based on expected pain was reported, whose analgesic prescription guidelines are correlated to pain scores at based on a VAS scale, and paracetamol, dipyron and tramadol may be prescribed, depending on the level of pain.

Dipyron is widely used in clinical practice, and its isolated administration is more indicated for the relief of moderate and severe pain, but, in some post-traumatic situations, the analgesic effect may be insufficient, requiring the use of opioids. These medications provide pain relief and the patient’s well-being in acute traumatic situations, but their use may be limited due to the fact that they can cause chemical dependency, and due to potential adverse effects such as decreased level of consciousness, nausea, vomiting and constipation (LOPES et al., 2019).

In a study by Calil et al. (2008), dipyron represented almost half of all anti-pain medication prescribed (49.4%), and the reduced use of opioids in the emergency sector, more specifically, may be related to the stigma of dependence associated with these drugs, factor that is not related to the use in acute pain in the emergency department. The need to create analgesia protocols and objectivity in the assessment of pain in the emergency room was highlighted.

Lopes et al. (2019) said it is necessary to raise awareness among health professionals to assess and treat trauma patients’ pain more carefully, promoting the development of specific protocols with a view to improving the quality of care and patient satisfaction.

Comparing the effectiveness of analgesics

in controlling pain in patients with trauma to the head and neck region, using a one-dimensional instrument, is relevant to establish a protocol considering the importance of judicious use of these medications, avoiding routine use without any basis. scientific, and contributing to an economically conscious practice of medication prescriptions.

The present study aimed to compare the effectiveness of analgesics, dipyron or paracetamol and tramadol, in controlling pain in patients with head and neck trauma, using a one-dimensional instrument, helping to establish an analgesia protocol for head and neck trauma. head and neck region or facial region.

METHODOLOGY

The prospective longitudinal observational cohort study was the methodological approach considered most appropriate for this work. The CAAE research project: 40314420.6.0000.5298 was previously evaluated and approved, according to Opinion No. 4,462,645, by the Research Ethics Committee of the Faculty of Biomedical Sciences of Cacoal - FACIMED.

Patients exposed to trauma to the head and neck region, admitted to the Oral and Maxillofacial Surgery and Traumatology service of the Complexo Hospitalar Regional de Cacoal, were monitored from December 2020 to May 2021, who remained hospitalized and accepted their participation in the research through the signature on a free and informed consent form or that were authorized by their legal guardians.

The inclusion criteria in the study were: a) Patients admitted to the Oral and Maxillofacial Surgery and Traumatology service of the Cacoal Hospital Complex with trauma to the head and neck region who required the use of analgesic medications; b) Patients who remained hospitalized, conscious to determine their level of pain using the visual

analogue scale; and c) Patients who signed the Free and Informed Consent Form (TCLE) or who were authorized by their legal guardians.

The following were excluded from the study: a) Patients who refused to sign the ICF or who were not authorized by their legal guardians; b) Unconscious patients upon first care; and c) Patients who were transferred to other referral hospitals within 72 hours of hospital admission.

When signing the free and informed consent form, patients were asked about their subjective pain sensation using the adapted visual analogue scale (VAS) (Figure 1) used to measure pain, where one end indicates “no pain” and the another indicates “maximum pain”, at four moments, T1 = entry/admission of the patient, T2 = 24 hours after admission, T3 = 48 hours after admission and T4 = 72 hours after admission.

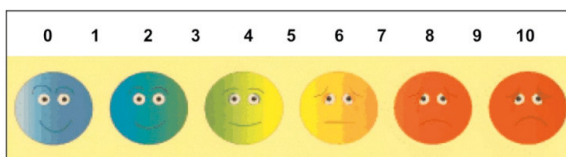


Figure 1 - Analogic visual scale (EVA)

Source: Rev Bras Otorrinolaringol
2009;75(1):76-9.

To establish when and which analgesics would be used, a widely used pain approach algorithm was considered due to its simplicity and clarity, developed by the World Health Organization (1996), which establishes the class of medications to be used in the treatment of pain as per its intensity, mild, moderate and severe.

To measure pain intensity, the visual analogue scale was converted into a numerical scale for recording purposes, in accordance with international validation (MINISTRY OF HEALTH OF PORTUGAL, 2003).

Therefore, the following numerical values were considered to measure pain intensity:

0 = “no pain”; 1 - 3 = “mild pain”; 4-6 = “moderate pain”; 7-8 = “severe pain”; and 9-10 = “maximum pain”. The use of dipyrone or paracetamol was defined for the treatment of “mild pain” to “moderate pain” (numerical range between 1 and 6) and tramadol for the treatment of “severe pain” to “maximum pain” (numerical range between 7 and 10).

Patients with subjective pain according to a scale of 1 to 6 on T1 were medicated with dipyrone 1000mg (one ampoule) intravenously, at intervals of 6 hours. For those allergic to dipyrone, paracetamol 750mg orally would be prescribed at intervals of 6/6 hours.

During the sequential assessments at T2, T3 and T4, when pain progressed in the analogue scale assessment beyond 6, patients were medicated with tramadol 100mg + 100ml of 0.9% saline solution in intravenous injection, at intervals of 12/12 hours.

In cases where pain remained at 1 to 6 in sequential assessments at T2, T3, and T4 on the visual analogue scale, analgesia with dipyrone or paracetamol was maintained.

Patients complaining of pain above 6 on T1 were medicated with 100mg tramadol + 100ml of saline solution intravenously every 12 hours. During the sequential assessments at T2, T3 and T4, when the pain remained above 6, opioid medication was continued, when it decreased below 7, dipyrone or paracetamol was started according to the established dosages.

If the pain was reduced to 0, the analgesic medication would be stopped.

A data collection table was used to record and control the pain assessment measured using the visual analogue scale.

Additionally, the region of traumatic injuries was noted, which include FRACTURES OF THE LOWER THIRD OF THE FACE (mandibular fracture), FRACTURES OF THE MIDDLE THIRD OF THE FACE (fractures

of the maxilla, zygomatic orbital complex and nasal fractures), FRACTURES OF THE UPPER THIRD OF THE FACE (fracture frontal bone), PANFACIAL FRACTURES (fractures involving two or more thirds of the face), and SOFT TISSUE INJURIES (any trauma involving soft tissues of the face, not requiring surgical intervention on facial bones).

To evaluate the adequacy of analgesia, the Pain Management Index (IMD) proposed by Cleeland and Ryan (1994) was used, which analyzes analgesic potency (PA) in relation to the pain intensity (DI) reported by the individual, as demonstrated in study by Calil and Pimenta (2005) with satisfactory results.

Analgesics were classified according to their potency (PA) into:

- 0 – absence of analgesic medication
- 1 – analgesic and non-hormonal anti-inflammatory (paracetamol and dipyrrone)
- 2 – weak opioid (tramadol)
- 3 – strong opioid (not used)

Pain intensity (DI) was classified into:

- 0 – no pain
- 1 – mild pain (1 – 3)
- 2 – moderate pain (4 – 6)
- 3 – severe pain (7 – 8) or maximum pain (9 – 10)

The IMD is obtained by subtracting the pain intensity (ID) from the analgesic potency (PA), that is, $IMD = PA - ID$. The IMD ranges from -3 to +3 and negative scores indicate analgesic inadequacy and positive or zero scores indicate analgesic adequacy.

The IMD was named from 1 to 4 depending on the moment of pain measurement: IMD1 (T1=patient entry/admission); IMD2 (T2= 24 hours after admission); IMD3 (T3= 48 hours after admission); and IMD4 (T4= 72 hours after hospitalization).

The data collected throughout the research were entered to process descriptive analyzes and the results were organized in tables and

frequencies in absolute and relative numbers. For the quantitative variables referring to the comparison of the effectiveness of medications in controlling pain, the analysis was carried out by observing the IMD values and for the qualitative variables, absolute frequencies, percentages and the average were calculated.

RESULTS AND DISCUSSION

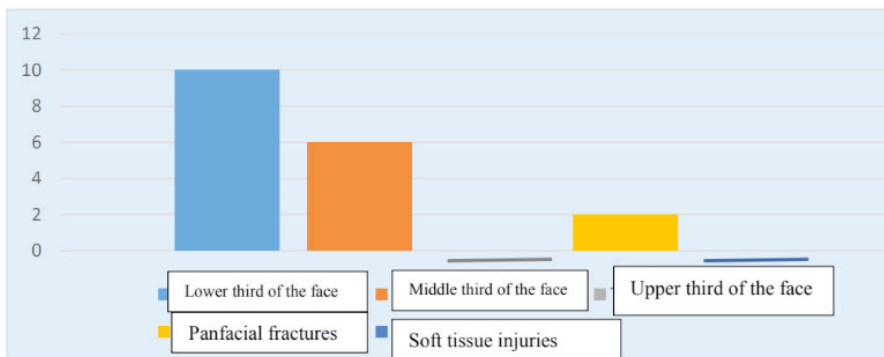
From December 2020 to May 2021, 19 patients who met the study inclusion criteria were admitted to the emergency room of the Cacoal Regional Hospital Complex, with 1 patient excluded from the study due to transfer to another reference hospital due to the presence of comorbidity, and the location of traumatic injuries according to the region affected is shown in Graph 1.

The distribution of traumatic injuries and the severity of trauma corroborate the findings in the literature about the prevalence of trauma in the head and neck region (LUZ et al., 2017; SANTOS, MEURER, 2013).

The pain intensity measured at the assessment moments is presented in Table 1.

Patients were questioned about their subjective pain sensation using the visual analog scale (VAS) at T1 (patient entry/admission), with 100% reporting pain. These data are compatible with the study by Lopes et al. (2019) who found 96.5% in measuring pain upon hospital admission of trauma patients.

Other studies with much larger samples point to pain as one of the main consequences of trauma and quantify the presence of pain in patients admitted to hospitals in percentages that vary between 75.61% and 90%, which is compatible with the findings of this study., considering the marked difference in the number of samples analyzed (CALIL, PIMENTA, BIROLINI, 2007; CALIL, PIMENTA, 2008; CALIL, PIMENTA, 2009; KHOSA et al., 2019; ORTEGA-ZUFIRÍA et al., 2021).



Graph 1 - ~Distribution of traumatic injuries according to the region affected

Note: (n = 18)

	T1		T2		T3		T4	
	n°	%	n°	%	n°	%	n°	%
Without pain	-	-	-	-	-	-	-	-
Light pain	5	27,78	5	27,78	8	44,44	9	50
Moderate pain	11	61,11	10	55,55	9	50	6	33,33
Severe pain	2	11,11	3	16,67	1	5,56	3	16,67
Maximum pain	-	-	-	-	-	-	-	-
Total	18	100	18	100	18	100	18	100

Table 1 - Distribution of patients according to pain intensity measured at the 4 assessment moments

Note: (n = 18)

	T1		T2		T3		T4	
	n°	%	n°	%	n°	%	n°	%
Dipyron	16	88,89	15	83,33	17	94,44	15	83,33
Paracetamol	-	-	-	-	-	-	-	-
Tramadol	2	11,11	3	16,67	1	5,56	3	16,67
Total	18	100	18	100	18	100	18	100

Table 2 - Distribution of patients according to medication received during hospitalization

Note: (n = 18)

The evolution of pain intensity measured at moments T2, T3 and T4 of assessment is directly related to the surgical procedures performed and the effectiveness of the medications used for analgesia. In this sense, Ortega-Zufiría et al. (2021) found that the influence of the surgical procedure on postoperative pain is determined by the location of the intervention, nature and duration of the procedure, type and extent of the injury, underlying surgical trauma and complications related to the surgery, and Alpen and Morse (2001) stated that managing pain from traumatic injuries is a complex issue that requires careful attention to the type of injuries, patient situation, goals of therapy, and stage of care.

The medications used to treat pain according to its intensity, mild, moderate and severe, were dipyrone and tramadol, shown in Table 2, with no paracetamol being prescribed, as no patient was allergic to dipyrone.

The algorithm developed by the World Health Organization (1996) became the guide for treatment for various types of pain, in the first step, starting with simple analgesics or non-hormonal anti-inflammatory drugs, which was proposed with the use of paracetamol or dipyrone, if there is no pain control, the use of weak opioids or their combination with analgesics is used, with the isolated use of tramadol being defined in this study.

Considering the pain intensity measured for the 18 patients included in this study, in the four evaluation moments, we had 72 evaluations and consequent medication prescriptions, with 63 prescriptions for dipyrone and 9 prescriptions for tramadol, 87.5% and 12.5% of the total, respectively.

Dipyrone is a non-steroidal anti-inflammatory drug (NSAID) with analgesic and antipyretic action. It was one of the first antipyretics and analgesics to be synthesized, in

1922, with a structure similar to amidopyrine, being one of the most used drugs as an analgesic in Latin America, in many Asian countries, and in Eastern and Central Europe. In other countries it is known as metamizole. In the 1970s, dipyrone was withdrawn from the market in several countries due to the risk of bone marrow aplasia or agranulocytosis. Regulatory agencies present divergent analyzes regarding the risk and benefit of using dipyrone. A recent meta-analysis, despite the low quality of the selected studies, found no differences in the prevalence of side effects with metamizole compared to placebo, paracetamol and other non-steroidal anti-inflammatory drugs, especially when used for a short period of time. (REZENDE, PAIVA, 2017).

The first clinical experience with tramadol in the USA occurred in 1969 (BONJARDIM, 2001).

The mechanism of action of tramadol is complex, considered a weak opioid receptor agonist, and the analgesic action is complemented by the release of serotonin and inhibition of noradrenaline reuptake in the central nervous system. The main side effect is nausea, other adverse effects include dry mouth, constipation, irritability, headache, sweating and dizziness (REZENDE, PAIVA, 2017).

The Pain Management Index (IMD) is named according to the moment of pain measurement in IMD1 (T1=patient entry/admission); IMD2 (T2= 24 hours after admission); IMD3 (T3= 48 hours after admission); and IMD4 (T4= 72 hours after hospitalization), is shown in Table 3.

	IMD ₁		IMD ₂		IMD ₃		IMD ₄	
	n°	%	n°	%	n°	%	n°	%
3	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-
0	5	27,78	5	27,78	8	44,44	9	50
-1	13	72,22	13	72,22	10	55,56	9	50
-2	-	-	-	-	-	-	-	-
-3	-	-	-	-	-	-	-	-
Total	18	100	18	100	18	100	18	100

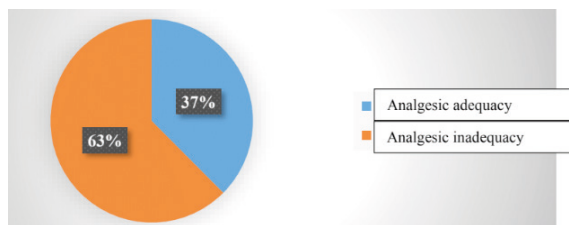
Table 3 - Distribution of patients according to the Pain Management Index

Note: (n = 18)

The assessment of analgesia adequacy using the Pain Management Index (IMD) proposed by Cleeland and Ryan (1994) varies from -3 to +3 and negative scores indicate analgesic inadequacy and positive scores or zero indicate analgesic adequacy.

Analgesic inadequacy in the face of pain reported by patients is a result of oligoanalgesia and undertreatment of pain. Several authors have concluded that it is common for patients not to receive the necessary analgesia after an acute injury, requiring changes in attitude regarding the use of analgesics by healthcare teams. health (MORGAN-JONES, 2000; ALPEN, MORSE, 2001; CALIL, PIMENTA, 2005).

The results found point in the same direction, suggesting that the definition of the medication to be used for analgesia, in addition to being conditioned on the measured pain intensity, could use greater variation aimed at suppressing pain. The calculation of the average Pain Management Index (IMD) in the four measurement moments, demonstrating the adequacy/inadequacy of analgesia, is shown in Graph 2.



Graph 2 - Distribution of analgesic adequacy according to the Pain Management Index

According to Noel (2015), the effectiveness of a medicine is measured by evaluation of the clinical and statistical results of the clinical trial, however, as well demonstrated by Marley (2000), effectiveness can be defined as “the extent to which a medicine achieves the intended effect in the usual clinical environment”, and can be evaluated through observational studies of actual practice, allowing practice to be assessed in qualitative as well as quantitative terms.

Considering the medication prescriptions used, we observed that they occurred after each of the moments of pain intensity measured, thus each of the 18 patients included in this study were medicated 4 times, totaling 72 prescriptions, however, to evaluate the ability to reduction of pain from the two medications used, it is necessary to compare the painful intensity measured at one moment and the painful intensity measured at the next moment, in order to be able to verify whether the medicine was effective in promoting analgesia. To this end, pain intensity was considered measured in 3 intervals: T1 - T2, T2 - T3 and T3 - T4, then 54 intervals were evaluated for the 18 patients, with the reduction in pain intensity being considered effective in the second moment of each interval and as not effective in maintaining or increasing pain intensity.

Dipyrone prescriptions and applications occurred 48 times and tramadol prescriptions occurred 6 times in the 54 intervals observed for the 18 patients, as shown in Tables 4 and

5, respectively.

	T1 - T2		T2 - T3		T3 - T4		TOTAL	
	E	NE	E	NE	E	NE	E	NE
Dipyrone	4	12	7	8	3	14	14	34
Total	16		15		17		48	

Table 4 - Distribution of dipyrone prescriptions according to the effectiveness of the medication

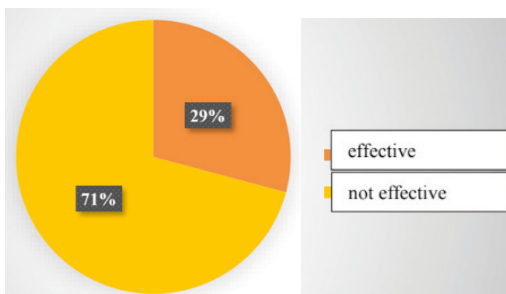
Nota: (n = 48). *E = EFFECTIVE †NE = NOT EFFECTIVE

	T1 - T2		T2 - T3		T3 - T4		TOTAL	
	E	NE	E	NE	E	NE	E	NE
Tramadol	2	-	2	1	-	1	4	2
Total	2		3		1		6	

Table 5 - Distribution of tramadol prescriptions according to the effectiveness of the medication

Note: (n = 6). *E = EFFECTIVE. †NE = NOT EFFECTIVE.

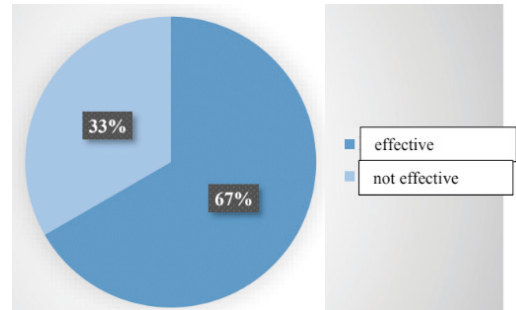
In a review of a series of Cochrane reviews of eight studies on the use of dipyrone to treat pain after surgery in adults, the authors concluded that dipyrone provides good pain relief in about 70% of those treated (HEARN, DERRY, MOORE, 2016). The results of this study did not find similarity with this finding, as dipyrone, when administered, was able to reduce the pain intensity of patients in only 29% of the intervals analyzed, as shown in Graph 3.



Graph 3 - Distribution of dipyrone effectiveness

Note: (n = 48). *Percentages obtained from the absolute numbers in Table 4.

The results regarding tramadol administration occurred only 6 times in the observed intervals. Despite the small sample, the medication was able to reduce patients' pain intensity in 67% of the intervals analyzed, as shown in Graph 4.



Graph 4 - Distribution of tramadol effectiveness

Note: (n = 6). *Percentages obtained from the absolute numbers in Table 5.

Through the development and standardization of an experimental model that made it possible to study the physiological mechanisms involved in a specific type of painful conditions related to TMJ in rats, Bonjardim (2001) demonstrated that both tramadol and dipyrone reduced in a dose-dependent manner the number of quantifiable harmful behaviors.

The data found in this study demonstrate an important variation in relation to the effectiveness of the two medications to produce analgesia in patients with trauma to the head and neck region followed for a period of 72 hours from hospital admission, with the effectiveness of tramadol being superior. the effectiveness of dipyrone, and it must be considered that the sample used was small, mainly to observe the effectiveness of tramadol.

Eizadi, Jalili and Dehpour (2018). They concluded that effective pain management is one of the most important aspects of emergency medical practice and an ideal approach to pain control is the administration

of effective medications with minimal side effects, through an appropriate route, with pain being mild to moderate. It is generally controlled with non-opioid agents, while opioids are used for moderate to severe pain. The results found showed that although dipyrone allowed relative pain control, maintaining the intensity measured at a level of mild to moderate pain, it was unable to promote pain suppression and was ineffective in reducing pain intensity.

For Viveiros et al. (2018) pain management in the Emergency Service is complex due to its subjectivity and still remains a challenge, and safe and effective quality of care will avoid complications secondary to prolonging the period of pain, as well as providing the patient with greater comfort in service in these locations. This study corroborates these statements, demonstrating the need to face this challenge in the search for better quality of care and offering effective analgesia to all patients.

Calil and Pimenta (2005) alerted to some issues that deserve attention and that were highlighted in the development of the present study: "Since pain is a common phenomenon in trauma victims, why is there not a chapter in the guidance manuals for care for polytrauma patients? specific dedicated to the topic? Why is the use of opioids in our country much lower than that used in other countries in emergency services?"

The results found show the need for reflection on the importance of measuring pain intensity routinely for adequate analgesia for patients exposed to trauma to the head and neck region, admitted to the Oral and Maxillofacial Surgery and Traumatology service of the Regional Hospital Complex of Cacoal., which confirms the proposal presented by Oliveira et al. (2019) about the adoption of pain assessment scales in critically ill patients, as well as the use of

analgesia and handling protocols to improve the quality of care provided and the patient's recovery. Along the same lines, Fortunato et al. (2013), had stated that pain scales must be considered as valuable instruments for the correct management of patients' pain.

FINAL CONSIDERATIONS

The observation of patients exposed to trauma to the head and neck region, admitted to the Oral and Maxillofacial Surgery and Traumatology service of "Complexo Hospitalar Regional de Cacoal", from December 2020 to May 2021, allowed us to conclude that:

The highest prevalence of traumatic injuries occurred in the lower third of the face, representing more than 50% of injuries; 100% of patients questioned about their subjective pain sensation using the visual analogue scale (VAS) at the time of hospital admission reported pain, with 27.78% being mild pain, 61.11% moderate pain and 11.11% severe pain, corroborating the findings in the literature that point to pain as one of the main consequences of trauma;

The results found by calculating the average Pain Management Index (IMD) at the time of admission and at intervals of 24h, 48h and 72h, indicated 37% analgesic adequacy and 63% analgesic inadequacy for the pain reported by patients, suggesting oligoanalgesia and pain undertreatment;

Dipyrone was effective in reducing pain intensity in 29% of the intervals analyzed and not effective in 63% of intervals, while tramadol was effective in reducing pain intensity in 67% of intervals and not effective in 37% of intervals;

Managing pain reported by patients exposed to trauma to the head and neck region is a challenge, requiring reflection on the importance of measuring pain intensity through pain assessment scales on a routine

basis, as well as the use of analgesia protocols. in the search for the best quality of care and offering effective analgesia to all patients;

The number of samples observed and the effectiveness results of both tramadol and

dipyrone were not sufficient to demonstrate a safe path in the construction of an analgesia protocol, and it is important to carry out future studies that consider these results as a basis for new reflections.

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