

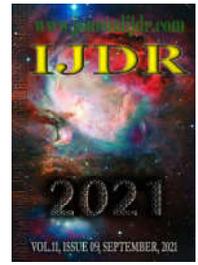


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RESEARCH ARTICLE

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## ACUTE PAIN IN EMERGENCY DEPARTMENT AND THE CONSEQUENCES OF ITS INADEQUATE MANAGEMENT

<sup>1</sup>Olga Francis Pita Chagas; <sup>2</sup>Pedro André Kowacs; <sup>3</sup>José Geraldo Speciali; <sup>4</sup>Gladys Lentz Martins and <sup>1</sup>Élcio Juliato Piovesan

<sup>1</sup>Department of Internal Medicine and Health Sciences, Hospital de Clínicas, Federal University of Paraná, Curitiba, Paraná, Brazil; <sup>2</sup>Neurology Service, Hospital de Clínicas, Federal University of Paraná, Curitiba PR, Brazil; <sup>3</sup>Medical School of Ribeirão Preto, University of São Paulo, Ribeirão Preto, São Paulo, Brazil; <sup>4</sup>Neurology Service, Governador Celso Ramos Hospital, Florianópolis, Santa Catarina, Brazil

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#### \*Corresponding author:

Olga Francis Pita Chagas.

### ABSTRACT

Pain is one of the main reasons for seeking emergency services and its commonly neglected or undertreated. **Objective:** To characterize the main types of pain in the emergency department, and to evaluate analgesic strategies and responses. **Methods:** A hundred and ten adult patients with acute pain complaints were evaluated between June and September of 2017 at the emergency department of Governador Celso Ramos Hospital. Subjects were submitted to a standardized structured interview designed for that purpose. **Results:** Of the 110 individuals aged 38.32±15.07 years, 52.73% were female. Pain site frequencies were: 1) abdominal pain (23.64%); 2) low back pain (23.64%); 3) head pain (23.64%); other sites (10%). Almost 83% were treated with a direct relationship between the chosen analgesic and the location of the pain. At discharge, total and partial improvement were attained by 51.82% and 30% of subjects, respectively. Eighteen percent of subjects had their pain not treated. Home analgesia was not prescribed for half unmedicated subjects. **Conclusion:** In most cases, satisfactory pain control was attained, but some patients were discharged with pain and without home analgesia, contributing to an increase in demand for medical care in emergency department.

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## INTRODUCTION

Pain is one of the most reported symptoms in daily medical practice, being present in about two-thirds of visits to emergency department (ED) (International Association For Study of Pain, 1994; Marubayashi; Shimoda; Constantino, 2009). Even though it is a frequent symptom, its treatment may be inadequate, obscured by the daily demand, by the lack of medication options or by the complexity of the clinical situation. A poor approach to pain can lead to loss in quality of life secondary to sub-treatment and to more returns for further medical help, overburden EDs (Grant, 2006; Pines; Hollander, 2008). This study aimed to characterize the main pain syndromes present at the ED of a public tertiary hospital in the Florianópolis's city, to evaluate the pattern and consistency of response to different symptomatic medications in these patients, and to identify the approaches taken, especially at patients' discharge.

## MATERIALS AND METHODS

This is a descriptive cross-sectional study, with a quantitative approach and individual and non-participant observation. A hundred and ten adult patients who sought care in the Hospital Governador Celso Ramos ED (HGCR-ED) due to pain complaints as their main symptom were evaluated between the months of June and September 2017. Risk classification screening was performed by the nursing team but therapeutic management was decided by the physicians on duty. Sample selection was done through simple random probability sampling, using the smartphone application "Random number UX", version 1.2.4, for Android mobile operating system, developed by UX Team Apps, which assigned a random number to each patient who respected the selection criteria described above, selecting between one (minimum) and five (maximum) potential participants per visit, in order to guide data collection. Subjects answered to a structured questionnaire, specially designed for the study, which included demographic information (age and sex), self-medication reports, pain features (intensity, duration, character, irradiation, associated features,

previous episodes), therapeutic management, individual response to instituted analgesia and prescription at discharge. Before any study procedure patients read and sign an Informed Consent Term. In addition, patients' medical prescriptions were checked in order to identify which analgesics were being used. Therapeutic efficacy was assessed one hour after administration of the medication. There was no intervention in pain management by the research staff. To estimate pain intensity, the Non-Visual Analog Linear Scale (Schechter; Altman; Weisman, 1990) was used and the responses were categorized into four levels, according to the World Health Organization's Analgesic Pain Scale (Brasil, 2003): no pain (0), mild pain (0.1 to 3.0), moderate pain (3.1 to 7.0) and severe pain (7.1 to 10). At the end of the categorization, mild and moderate pains were combined into a single group called non-severe pain.

Pains were classified and divided based on their location into: 1) abdominal pain; 2) low back pain; 3) head pain; and 4) other sites (pains in locations other than those previously mentioned).

This study was done in accordance with the principles of Resolution 466/2012 of the Conselho Nacional de Saúde (Conselho Nacional de Saúde, 2012), as well as those of the 1964 Helsinki Declaration (Finlândia, 1964) and its subsequent amendments, and was approved by the Governador Celso Ramos Hospital Ethics and Research Committee (CAAE in 69611417.7.0000.5360). For statistical analysis, IBM® SPSS Statistics® pack was used. Descriptive analysis, including categorical variables, was described by exposing general characteristics and distributing frequencies and percentages. To compare categorical variables, Pearson's chi-square test or Fisher's exact test were used. A significance level of  $p < 0.05$  or  $p < 0.008$  was adopted, corrected by Bonferroni when needed.

## RESULTS

Of the 110 patients evaluated, 58 (52.73%) were female. The average age was  $38.32 \pm 15.07$  years, and 60.91% of cases comprised young adults in the 20-40-year age bracket. Abdominal pain was the one that most led to medical care, being responsible for 42.73% of the patients. Low back pain comprised 23.64% of the sample, and the same proportion - 23.64% - was found for head pain which included headache, otalgia, odynophagia, facial pain and eye pain. Pain in other locations was less frequent (10%). About gender's prevalence, the most patients with low back pain was males (30.77%) and the most patients with other pains were females. Regarding pain features as described by patients, most were reported as continuous (82.73%) and localized (64.54%). Prevalence of non-severe pain and severe pain was very close, with 50.91% for the former and 49.09% for the latter, respectively ( $p > 0.008$  in all groups, Fisher's exact test, with Bonferroni correction). In addition, in 76.36% of the population, pain was reported to be associated with other symptoms (Table 1), such as nausea and vomiting, actually the most cited ones (46.36%). There was no statistical difference between the different pain locations regarding associated symptoms, except for urinary symptoms (polyuria, dysuria, polyuria, urinary incontinence), more present in abdominal pain ( $p = 0.006$ , Fisher's exact test, with Bonferroni correction) and lumbar ( $p = 0.002$ , Fisher's exact test, with Bonferroni correction) pain, as compared to head pain.

More than half study subjects had already experienced pain with characteristics similar to their ongoing pain (60.91%), present for up to two days before seeking medical attention (60%). In addition, nearly one third of patients (29.09%) reported having sought medical help at another emergency room before coming to the HGCR-ED to seek attention for their pain. Regarding self-medication, 39.09% of subjects used painkillers without a medical prescription before seeking care, with no difference between genders ( $p = 0.696$ , Fisher's exact test). Most individuals underwent clinical treatment only ( $n = 91$ , 82.73%). Intensity of pain was a determining factor for analgesia, and subjects having severe pain were preferably medicated as compared to patients with non-severe pain ( $p = 0.010$ , Fisher's exact test). There was no correlation between pain intensity and the amount of

analgesics initially used ( $p = 0.402$ , Fisher's exact test), but drug combinations were given more often to cases bearing severe pain (54%) as compared to those with non-severe pain (43.9%). Analgesics were prescribed for most patients with abdominal pain (89.36%), low back pain (92.31%) or head pain (80.77%). A single analgesic was usually prescribed for individuals with abdominal pain (63.83%), but in contrast, for both low back pain (73.08%) and head pain (46.15%) a combination of two types of analgesics was commonly prescribed. In addition, four patients with non-severe abdominal pain refused therapy. A clear relationship between certain medication and pain site was found ( $p < 0.001$ , Fisher's exact test). For abdominal pain, there was a preference for using Buscopan Composto®, while for head pain, tenoxicam and its association with sodium dipyrone were the most used drugs. Otherwise, the combination of Buscopan Composto® and tenoxicam was mostly used for low back pain (Table 2). No relationship was found between the type of medication and pain intensity, with the exception of sodium dipyrone, mostly used in non-severe pain ( $p = 0.021$ , Fisher's exact test).

As a result of the first approach, in 48 (52.75%) absolute pain control was attained, 83 (91.21%) individuals showed some degree of improvement in pain intensity, and 35 (38.46%) achieved only an improvement partial. In eight (8.79%) subjects pain remained unchanged. Patients presenting non-severe pain responded better to the first therapeutic approach, as compared to patients with severe pain ( $p < 0.001$ , Pearson's chi-square). Patients who kept on having pain after the first approach, had a higher percentage of additional analgesia (75%), compared to those with partial response (42.86%). In these cases, opioids were the commonly used class of drug, especially morphine and tramadol hydrochloride, irrespective of the location of pain. As expected, patients who had severe pain received a greater number of analgesics (66%), as compared to those with non-severe pain (46.34%), but this difference was not significant ( $p = 0.088$ , Fisher's exact test). However, when analyzed regarding location of pain, those individuals with abdominal pain received less analgesics as compared to other pains ( $p = 0.004$ , Fisher's exact test, with Bonferroni correction). At the end of management, among the patients who received analgesia in the ED, with the exception of a single patient who was in severe pain, there were 57 cases that progressed with total improvement and 33 that evolved to partial improvement, corresponding, respectively, to 51.82% and 30% of the study population. Improvement of pain, even partial, was a determining factor for patients' discharge. Of the 19 patients who were not medicated, 14 were released with non-severe pain (four refused therapy) and 5 with severe pain, representing a total of 17.27% of the total patients in the study.

There was a direct relationship between the intensity of pain at the time of admission and its outcome. Patients who came to the ED with severe pain had a greater tendency to be discharged with some degree of pain, in spite of treatment, compared to patients with non-severe pain ( $p = 0.009$ , Fisher's exact test). Figure 1 shows the medical procedures performed by the attending physician based on the pain evolutive during ED permanence. It can be seen that 12 (10.91%) patients needed to be hospitalized to treat their underlying medical condition. All of these patients underwent analgesia during the emergency room care and, only after some degree of pain relief, were hospitalized. The other 98 (89.09%) patients were discharged from the hospital. Of these, 78 (79.59%) received prescription of pain relievers to be taken at home. Of the 20 patients who kept their pain unchanged, which included those who did not undergo clinical treatment, 8 (40%) did not receive any prescription for home painkillers. None of these patients was admitted for clinical management of their underlying condition or pain control. Curiously, patients who left the ED without pain had more home analgesia prescribed than those who left it while persisting with some degree of pain ( $p = 0.019$ , Pearson's chi-square). Table 3 shows the final diagnoses attributed to the end of the evaluation by the attending physician, based on the location of the pain reported by the patients, including the cases that were submitted to hospitalization.

**Table 1. Prevalence of symptoms associated with different pain locations reported by patients<sup>a</sup>**

Symptoms	Class.	Pain locations								Total (N= 110)	
		Abdominal (N= 47)		Low back (N= 26)		Head (N= 26)		Others <sup>b</sup> (N= 11)			
		n	%	n	%	n	%	n	%	n	%
Nausea/Vomiting	Yes	27	57.45	11	42.31	12	46.15	1	9.09	51	46.36
	No	20	42.55	15	57.69	14	53.85	10	90.91	59	53.64
Urinary <sup>c</sup>	Yes	11	23.40	9	34.61	0	0	3	27.27	23	20.91
	No	36	76.60	17	65.39	26	100	8	72.73	87	79.09
Diarrhea	Yes	13	27.66	1	3.85	1	3.85	0	0	15	13.64
	No	34	72.34	25	96.15	25	96.15	11	100	95	86.36
Fever	Yes	9	19.15	1	3.85	3	11.54	0	0	13	11.82
	No	38	80.85	25	96.15	23	88.46	11	100	97	88.18
Other symptoms <sup>d</sup>	Yes	12	25.53	0	0	19	73.08	4	36.36	35	31.82
	No	35	74.47	26	100	7	26.92	7	63.64	75	68.18
None	Yes	8	17.02	10	38.46	4	15.38	4	36.36	26	23.64
	No	39	82.98	16	61.54	22	84.62	7	63.64	84	76.36

Abbreviations: Class, classification; N, total number of cases; n, number of cases with the appropriate characteristics.

<sup>a</sup>More than one type of symptom was mentioned by the same patient.

<sup>b</sup>Limbs, genitals, neck, scapular region and chest.

<sup>c</sup>Dysuria, polaciuria, polyuria, urinary incontinence.

<sup>d</sup>Colds, constipation, dyspepsia, dyspnoea, phonophobia, photophobia, ocular hyperemia, hypoacusis, inappetence, nasal obstruction, otorrhea, postnasal discharge sensation, dizziness, cough, visual turbidity.

**Table 2. Prevalence of therapeutic regimens used as the first option in an attempt to initially control pain, based on its location**

1st analgesic option in the attempt of initial pain control	Class.	Pain locations								Total (N= 91)	
		Abdominal (N= 42)		Low back (N= 24)		Head (N= 21)		Others <sup>a</sup> (N= 4)			
		n	%	n	%	n	%	n	%	n	%
Buscopan Composto®	Yes	24	57.14	1	4.17	1	4.76	1	25.0	27	29.67
	No	22	52.38	23	95.83	20	95.24	3	75.0	64	70.33
Buscopan Composto® + Tenoxicam association	Yes	5	11.90	7	29.17	2	9.52	0	0	14	15.38
	No	37	88.09	17	70.83	19	90.48	4	100	77	84.62
Tenoxicam + sodium dipyron association	Yes	0	0	3	12.5	8	38.09	2	50.0	13	14.29
	No	42	100	21	87.5	13	61.91	2	50.0	78	85.71
Sodium dipyron (isolated)	Yes	3	7.14	1	4.17	4	19.05	0	0	8	8.79
	No	39	92.86	23	95.83	17	80.95	4	100	83	91.21
Tenoxicam (isolated)	Yes	0	0	0	0	4	19.05	0	0	4	4.40
	No	42	100	24	100	17	80.95	4	100	87	95.60
Tramadol hydrochloride (isolated)	Yes	1	2.38	1	4.17	0	0	1	25.0	3	3.30
	No	41	97.62	23	95.83	21	100	3	75.0	88	96.70
Other associations <sup>b</sup>	Yes	7	16.67	9	37.5	2	9.52	0	0	18	19.78
	No	35	83.33	15	62.5	19	90.48	4	100	73	80.22
Other isolated drugs <sup>c</sup>	Yes	2	4.76	2	8.33	0	0	0	0	4	4.40
	No	40	95.24	22	91.67	21	100	4	100	87	95.60

Abbreviations: Class, classification; N, total number of cases; n, number of cases with the appropriate characteristics.

<sup>a</sup>Limbs, genitals, neck, scapular region and chest.

<sup>b</sup>Sodium dipyrona + acetylsalicylic acid; Buscopan Composto® + ketoprofen; Buscopan Composto® + tramadol hydrochloride + tenoxicam; Buscopan Composto® + tramadol hydrochloride; Buscopan Composto® + acetaminophen + codeine; ketoprofen + tramadol hydrochloride; tenoxicam + sodium dipyrona + tramadol hydrochloride; tenoxicam + morphine; tenoxicam + acetaminophen.

<sup>c</sup>Ketoprofen; morphine; acetaminophen.

It can be seen that most patients who were hospitalized had pathologies that were manifested, preferably, by abdominal pain.

## DISCUSSION

This study found out that most individuals who sought clinical care in the ED because of pain were young adults, with a slightly higher female prevalence. Similar to previous studies (Niska; Bhuiya; Xu, 2010; Barreto; Gomes; da Silva et al., 2012), abdominal pain was the most reported by patients. It is known that the occurrence of pain varies according to age bracket and, according to Von Korff et al. (1988), some pains prevalence tend to decline with advancing age, including headache, facial pain and abdominal pain, whose etiologies are more prevalent in younger patients, justifying the predominance of the age group found in the present analysis, as found in another study (Barreto; Gomes; da Silva et al., 2012). In addition, there is an important decline in ED appointments of elders (Foley, 1994), probably secondary to difficulty in reaching ED facilities due to disability or even due to dependence on third parties, degeneration of

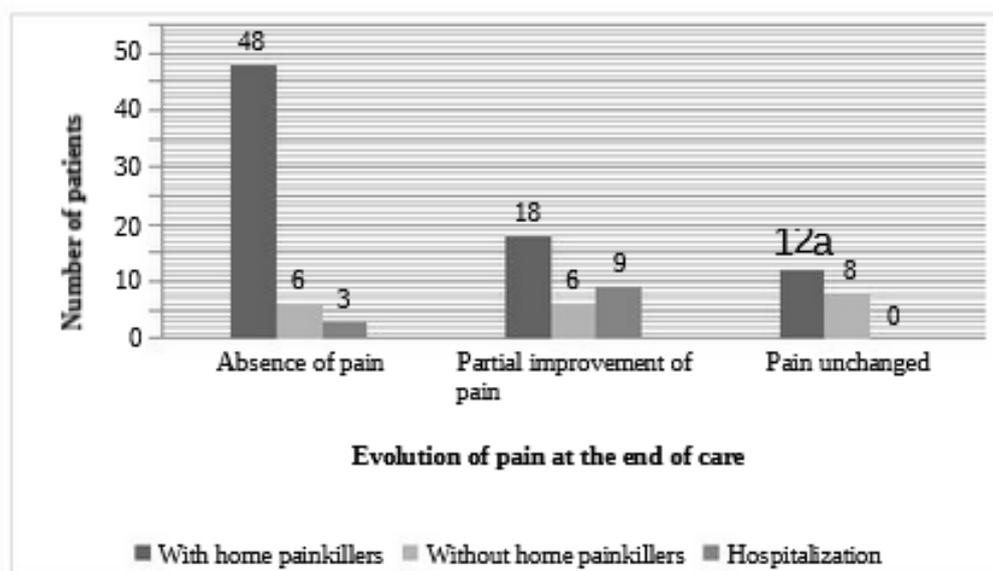
nociceptive pathways, deterioration of mental status and increased mortality with over the years (Brattberg; Thorslund; Wikman, 1989). The female predominance on pain patients of several EDs (Marubayashi; Shimoda; Constantino, 2009; Dal Ponte; Machado; Dutra; Cardoso; Lima, 2008) may be secondary to constitutional, endocrine, cultural and behavioral of this gender (Keogh, 2006). Furthermore, compared to men of similar age, women are more at risk for stress-related disorders, such as fibromyalgia (Wolfe; Ross; Anderson; Russell, 1995) and chronic pain (Keogh, 2006), and tend to suffer from entities such as migraine (Rasmussen; Olesen, 1994; Stovner; Hagen; Jensen et al., 2007), irritable bowel syndrome, chronic pelvic pain and interstitial cystitis (Triadafilopoulos; Finlayson; Grellet, 1998), justifying the female predominance in abdominal and head pain present in this study. Almost 13% of cases of abdominal pain in the analysis were due to urinary tract infection, most of them in females. According to Vieira Neto (2003), this disease is more prevalent in this gender due to anatomical and physiological changes present in the urinary tract that favor its appearance, including a shorter urethra and greater proximity to the anus and the

**Table 3. Prevalence of final diagnoses attributed to patients by the attending physician based on the location of the pain, including the number of cases submitted to hospitalization**

Pain location	Final diagnoses	Gender		Total	Hospitalization
		F	M		
Abdominal (n=47)	Acute gastroenterocolitis	9	6	15	0
	Renal calculi	2	6	8	0
	Urinary tract infection	6	0	6	0
	Acute abdomen	4	0	4	3
	Abdominal neoplasms	1	3	4	1
	Acute gastritis	0	4	4	0
	Pelvic inflammatory disease	2	0	2	0
	Renal calculi with UTI	1	1	2	2
	Retocele	1	0	1	0
	Community-acquired pneumonia	1	0	1	0
Head (n=26)	Primary headache, probably migraine	10	4	14	0
	Acute otitis	2	2	4	0
	Acute meningitis	0	2	2	2
	Sinusopathy	0	1	1	0
	Acute gastroenterocolitis	0	1	1	0
	Brain tumor recurrence	0	1	1	1
	Acute conjunctivitis	1	0	1	0
	Eye pain to clear up	1	0	1	0
	Acute subarachnoid hemorrhage	1	0	1	1
Low back (n=26)	Renal calculi	6	11	17	0
	Mechanical low back pain	3	5	8	1
	Renal calculi with UTI	1	0	1	0
Others <sup>a</sup> (n=11)	Musculoskeletal precordialgia	3	2	5	0
	Vaginal candidiasis	2	0	2	0
	Pulmonary nodule	0	1	1	0
	Testicular neoplasm	0	1	1	0
	Acute chronic type C hepatitis	0	1	1	1
	Urinary tract infection	1	0	1	0
<b>TOTAL</b>		<b>58</b>	<b>52</b>	<b>110</b>	<b>12</b>

Abbreviations: n, number of cases; F, female; M, male; UTI, urinary tract infection.

<sup>a</sup>Limbs, genitals, neck, scapular region and chest.



**Figure 1. Graphical demonstration of the medical procedures performed by the attending physician based on the pain evolutive profile during ED permanence**

vaginal vestibule, which allow colonization by enterobacteria that usually cause infections. In addition, about one third of cases of abdominal pain were caused by acute gastroenterocolitis, which does not have a well-established prevalence between genders, regardless of their etiology, in the literature (Torres Filho, 2013). In this analysis, there was a predominance of the female gender. About head pain, around 54% of cases were caused by primary headaches, probably migraine, which is more prevalent in women (Rasmussen; Olesen, 1994; Stovner; Hagen; Jensen et al., 2007).

The prevalence of the report of seeking previous care for current pain reinforces the idea that many patients are being subjected to inadequate treatment of pain in some EDs causing several consecutive going to this unit for pain control (Miner; Biros; Trainor; Hubbard; Beltram, 2006). With regard to self-medication, according to the Instituto de Ciência, Tecnologia e Qualidade (2018), in Brazil, about 80% of people over 16 years take medicines without a medical prescription, and 48% of these refers to painkillers. This data is consistent with our findings, that showed self-medication to be

prevalent, since it was found in 39.09% of the cases. At the time of this study, there were no pre-established and formatted protocols for the management of pain in the ED where the analysis was performed. Approaches were taken based on the experience and individual knowledge of the physicians in charge of the ED. It is important to remember that, also found in this study, some patients do not accept to be medicated due to the feelings of anguish and discomfort facing intravenous therapy (Nir; Paz; Sabo; Potasman, 2003), suggesting this option to be used only for severe or disabling pains. Interestingly enough, in both head and low back pain, there was a tendency to use simultaneous medications in the first attempt to control pain, unlike abdominal pain, whose management was more parsimonious, a finding reinforced by the fact that patients with abdominal pain also received less analgesics during ED stay as compared to patients with other pains. A possible explanation to these findings is a supposed physician's fear that effective analgesia may postpone the diagnosis of abdominal diseases analgesia may postpone the diagnosis of abdominal diseases (Marubayashi; Shimoda; Constantino, 2009; Manterola; Vial; Moraga; Astudillo, 2007; Bertoncello; Xavier; Nascimento; Amante, 2016). Information on the safety of analgesics administration, including the use of intravenous opioids, in the setting of acute abdominal conditions, is available for almost two decades (Manterola; Vial; Moraga; Astudillo, 2007; Thomas; Silen; Cheema et al., 2003). Therefore, pain control in these should not be delayed. In the present study, a direct relationship was observed between the choice of analgesic regimen and the location of the pain. In cases of head pain, for example, tenoxicam in combination with sodium dipyrone was preferably used, a result similar to that found by Ruiz, Santos, Siqueira and Cotta (2007). The use of NSAIDs in the treatment of primary headache attacks is well known and widely indicated in the literature (Pardutz; Schoene, 2010; Bordini; Roesler; Carvalho et al., 2016). In our study, the preference for tenoxicam as the NSAID of choice can be justified by its ease and flexibility in administration, which can be either intramuscular or intravenous, by its rapid analgesic action and, also, by its vast availability in the Brazilian EDs, possibly related to its affordable price (Todd; Clissold, 1991). In abdominal pain, a combined intravenous analgesic, scopolamine butylbromide associated with sodium dipyrone, known commercially as Buscopan Composto®, was the medication of choice for most patients and was also widely used to treat other pains. The main compound in this product, sodium dipyrone, has a well known therapeutic effect on acute pain (Bertoncello; Xavier; Nascimento; Amante, 2016), although in our study it was used preferentially in less severe pains.

The improvement in pain, even partial, was a determining factor for the termination of care in the ED in the present study. For this reason, there was a higher percentage of additional analgesia to patients who maintained their pain unchanged after the first approach, compared to patients who achieved some degree of symptom improvement. Such an approach meant that, throughout the service, patients who had severe pain were subjected to a greater amount of analgesics, reflecting the lack of a stratified approach to pain management. Opioids are widely used for the management of refractory pain or of pain not responsive to common analgesics (Kraychete; Siqueira; Garcia, 2014). In Brazil, some physicians avoid prescribing opioids by lack of knowledge of its pharmacology or fear of possible adverse events, including the induction of dependence (Marubayashi; Shimoda; Constantino, 2009), as bias that compromises the quality and effectiveness of their medical approach. This assumption is reinforced by our finding that patients who had had severe pain at the time of admission were discharged with some degree of pain even after clinical treatment, in spite of receiving a greater amount of analgesics. They not only were managed with a step-care approach but also with insufficient analgesia. Excluding patients referred for hospitalization, almost 80% of the study remaining patients received prescription of home analgesia at discharge, most of which was offered to patients who had complete pain control. Of the patients who kept their pain unchanged, which included those who did not undergo clinical treatment, 40% did not receive any prescription for home pain relievers. These findings suggest a direct relationship between the therapeutic response and the quality and frequency of

assessments in which patients are submitted to the emergency departments, as previously described (Grant, 2006). It seems that patients who presented the best therapeutic response received paradoxically a more careful and detailed evaluation by staff in charge.

According to Marubayashi, Shimoda and Constantino (2009), health professionals have presented numerous reasons to justify an insufficient therapeutic management of pain in the ED, including the risk of adverse effects of opioids, the possibility of masking signs or symptoms and the lack of confidence and / or credibility about patient information about pain characteristics. In addition, Grant (2006) attributes much of the failure in pain management in the ED to the few reevaluations of patients with pain symptoms, the low optimization of analgesia and the lack of guidelines. In addition, some authors credit "oligoanalgesia" to the unfamiliarity on the part of health professionals about the rational use of analgesics, their side effects, their mechanisms of action, their drug interactions and their pharmacokinetics, as well as for ignoring how to evaluate and measure pain (Fosnocht; Swanson; Barton, 2005; Wilsey; Fishman; Ogden; Tsodikov; Bertakis, 2008). In a study carried out by Bertoncello, Xavier, Nascimento and Amante (2016), on 24 patients with acute pain treated in an ED, several weaknesses were found in the process of identification, management and evaluation of pain. Their study pointed the presence of underestimation and non-valorization of pain, the fear of making patients dependent on analgesics, parsimonious analgesic prescription and the lack of pain assessment and control scales. Thus, it is believed that the under-prescription of potent analgesics, the underestimation of pain and its inadequate assessment can explain the huge number of patients remaining with pain at hospital discharge (Miner; Biros; Trainor; Hubbard; Beltram, 2006; Fosnocht; Swanson; Barton, 2005; Wilsey; Fishman; Ogden; Tsodikov; Bertakis, 2008). Although the present study has demonstrated good pain control in the vast majority of cases, some patients ended up not being properly treated and kept their pain unchanged when the service ended. This conduct, in addition to reflecting the carelessness on the part of the team, favors possible delays in the treatment of pain and its underlying etiology, which may lead to its chronicity or even to consecutive journeys to the ED, evidenced in this analysis, thus contributing to for the emergence of expenses dispensed both to the health system, due to the overload and overcrowding of emergency services, and to the patient himself, especially with transportation. Although this study has highlighted some important aspects in relation to the characteristics of the most prevalent pain in an ED, including its therapeutic management, it was based in a circumscribed sample and the data cannot be easily extrapolated to a national scenario that includes patients from other geographic locations or from abroad. Some aspects not included in our aims perhaps could had brought relevant information such as data on the physicians on duty, like their age, their training and their years on practice. These information would certainly enrich the results and raise new aspects in the discussion. Perhaps collection of these data could be done by future studies and help to understand this controversial issue. It seems that the use of flowcharts and protocols for therapeutic assessment and management should be prioritized, as well as the institution of specific programs on the relevance of pain treatment in the emergency department, in order to raise the awareness of the teams, not only to help on the medical duties but also to guarantee humanization in the care of individuals in pain. Some consequences of an improved pain management that are not directly related to the patient condition would be the prevention ED overload and overcrowding and the reduction of medical costs, not only to the patient but also to the health system.

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