



PAIN MANAGEMENT IN AN EMERGENCY DEPARTMENT OF A TERTIARY HOSPITAL IN CASABLANCA

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Introduction:

Pain is defined by The International Association for the Study of Pain (IASP) as "an unpleasant sensory and emotional experience related to or described in actual or potential tissue damage" (1). In emergency rooms, 60% of patients experience acute pain and in 85% of cases, pain is the main reason for consultation (2). The fight against pain is a public health priority. The establishment of national guidelines and recommendations testifies to the institutional will and of health professionals to optimize their management. The organizational and structural impact as well as human resources are major determinants in the success of any pain management strategy, especially in emergencies, both symptomatic and etiological.

As a result, we carried out work within the emergency admissions department of the tertiary hospital to take stock of analgesia practices as well as the epidemiological and clinical characteristics of the patients concerned.

Materials and methods :

This is a prospective single-center, analytical cross-sectional study carried out over 3 months in an emergency department of a tertiary hospital in Casablanca.

The target population:

Prescribers: emergency physicians and internal physicians working in the emergencies of a tertiary hospital in Casablanca.

Patients: were included all patients presenting to the emergency room with acute or chronic pain, of any sex and educational level and socio-economic, whose age is greater than 15 years and who were treated by a method of drug analgesia. Patients who received local anesthesia were excluded from our study.

For all the patients included, the following data were collected: socio-demographic data including age, sex, educational level and socio-economic level, pathological history; data related to pain, namely the reason for admission, type of pain, specific characteristics, location, intensity, etiology of the pain, and data related to patient management (previous medication, analgesics administered, patient satisfaction patient and evaluation of the effectiveness of the treatment after 1 hour according to the simple numerical scale).

Data were entered and analyzed (univariate and multivariate analysis) using SPSS 20.0 software ($P < 0.05$ is considered significant). We performed multivariate analysis to look for associations between variables. For the qualitative variables, we used the chi² test and Fisher's exact test.

The rules of medical ethics and ethics were respected as well as the anonymity of the patient.

Results

Sociodemographic characteristics.

Of our total number of 500 patients with an average age of 36, 86 years with extremes ranging from 15 to 80 years. The sex ratio was 0.89. 32.6% of the cases were illiterate against 20.6% had a university level. For 74.6% of our patients, the socioeconomic level was average against 15% of low level. Finally, 63.8% of patients had at least one pathological history.

Table 1: Sociodemographic characteristics

Caractéristiques	value
Age	36,86 (15 – 80)
Sex	
Male	47.2 %
Féminine	52.8%
Educational level	
Illiterate	32.6%
Primary	23.6%
Secondary	23.2%
University	20.6%
Socio-economic level	
Low	15 %
Way	74.6%
High	10.4%
Presence of a pathological history	
Yes	36.2%
No	63.8%

Characteristics of pain:

81% of patients had acute pain, of which 30.9% of cases were traumatic.

Chronic pain was found in 19% of patients and 62.1% of cases were of rheumatic origin.

Pain was assessed by EVS in 96% of cases, by ENS in 92.4% and by VAS in 72.4%.

Pain assessed by EVS was severe in 59.4% of cases, moderate in 30% and mild in 2.8% of cases.

Previous drug intake

Self-medication was observed in 10.6% of cases. Anti-inflammatory drugs represented 66% of the self-medication molecules, followed by paracetamol which represented 24.5%, acetylsalicylic acid (aspirin) 7.5% and PPI 2%.

Pain relief in the emergency room

Nonsteroidal anti-inflammatory drugs were the first prescribed (34.72%), followed by co-analgesics represented by corticosteroids, antispasmodics, antacids and muscle relaxants (25%), then paracetamol (22.7%) and other treatments in 17.58% of cases. Paracetamol was administered orally in 56.07% of cases

against 43.93% by intravenous route. Regarding nonsteroidal anti-inflammatory drugs, the intravenous route was widely used (93.25%) and only 6.75% administered orally. Co-analgesics (corticosteroids, antispasmodics, antacids, and muscle relaxants) were administered in 62.9% orally, 32.4% intramuscularly and 4.7% intravenously.

Paracetamol was used in 97.5% in ENT. NSAIDs were used in 99% in traumatology, 98% in gynecology and 95.7% in rheumatology. Co-analgesics were used in 78.4% in traumatology, 65.7% in rheumatology and 3.9% in gynecology.

Table 2: breakdown of analgesics according to pathology

	Paracetamol		NSAIDs		Co-analgesics		Others	
	N°	%	N°	%	N°	%	N°	%
Traumatology	27	21.6	125	99	98	78.4	0	0
Rheumatology	22	31.4	67	95.7	46	65.7	9	12.1
Gastrology	59	62.8	24	25.5	0	0	59	62.8
Gynecology	5	9.8	50	98	2	3.9	42	82.4
Urology	12	60	17	85	0	0	12	60
Pulmonology	16	38.1	3	7.1	0	0	10	14
ENT	39	97.5	12	30	0	0	0	0
Neurology	11	33.3	18	54.4	17	51.1	1	3

Pain management assessment:

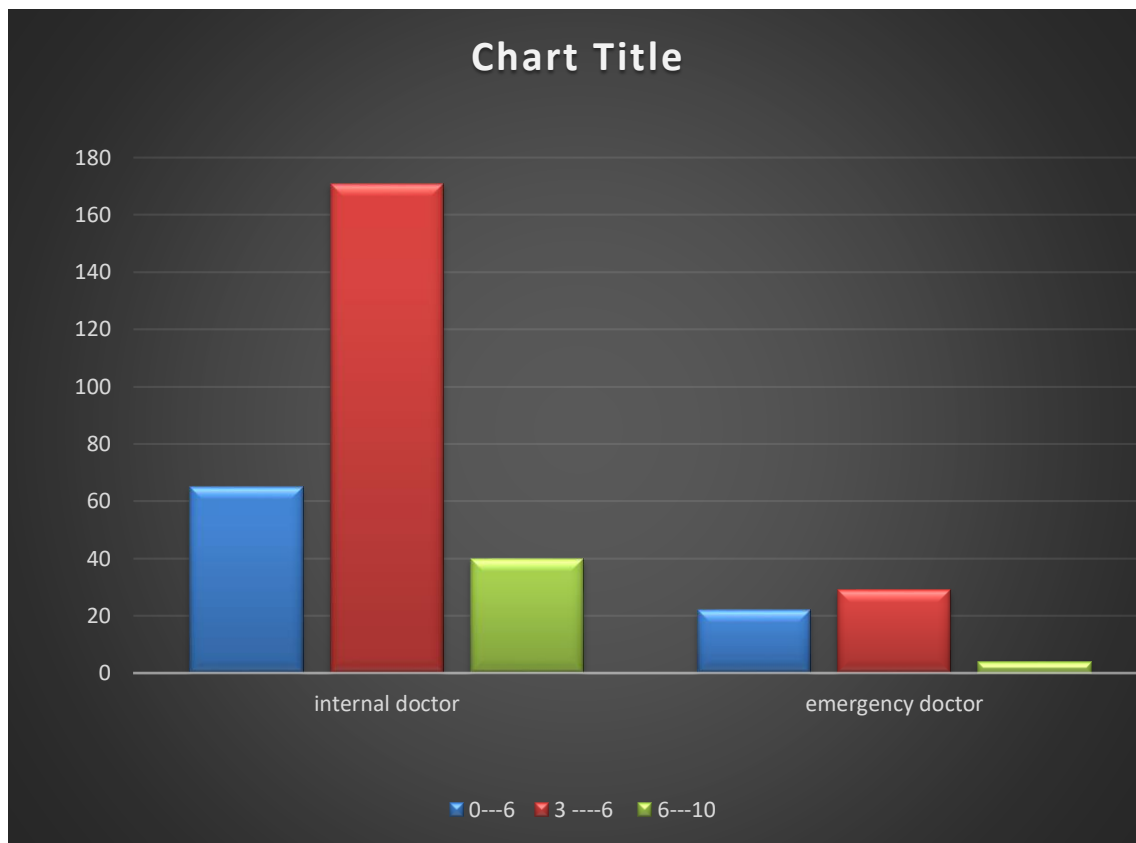


Figure 1: Influence of the prescriber on pain management:

In the combination of prescriber and pain management, a correlation was found, the professional status of the prescriber significantly influenced the intensity after his management $P = 0.027$

Influence of patient-related factors on pain management:

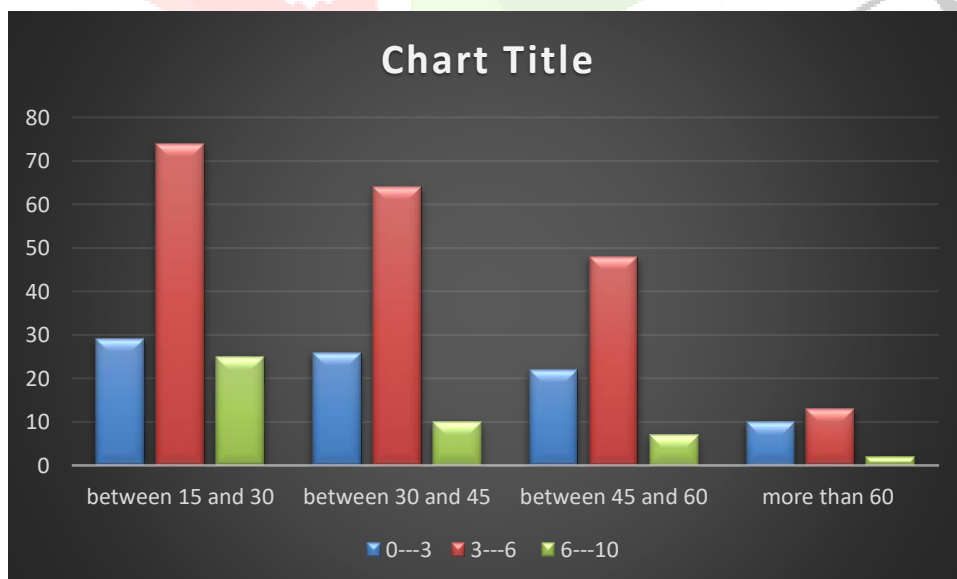


Figure 2: influence of patient age on pain management

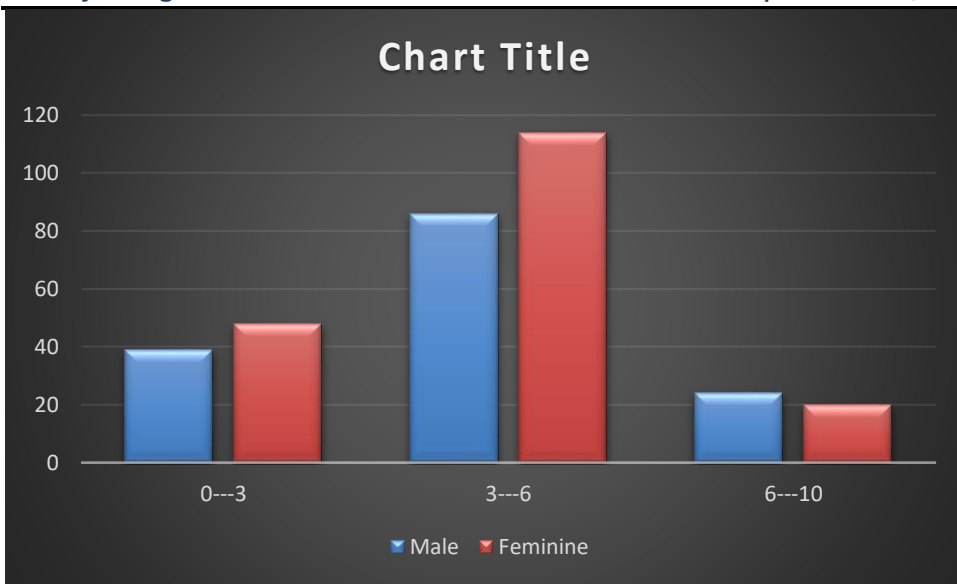


Figure 3: influence of patient gender on pain management

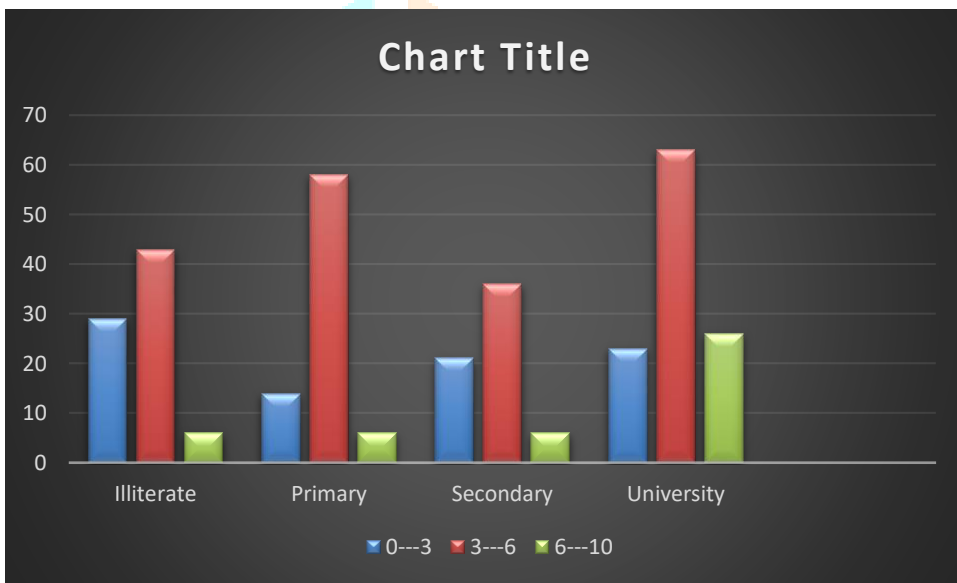


Figure 4 : influence of the level of study of patients on pain management

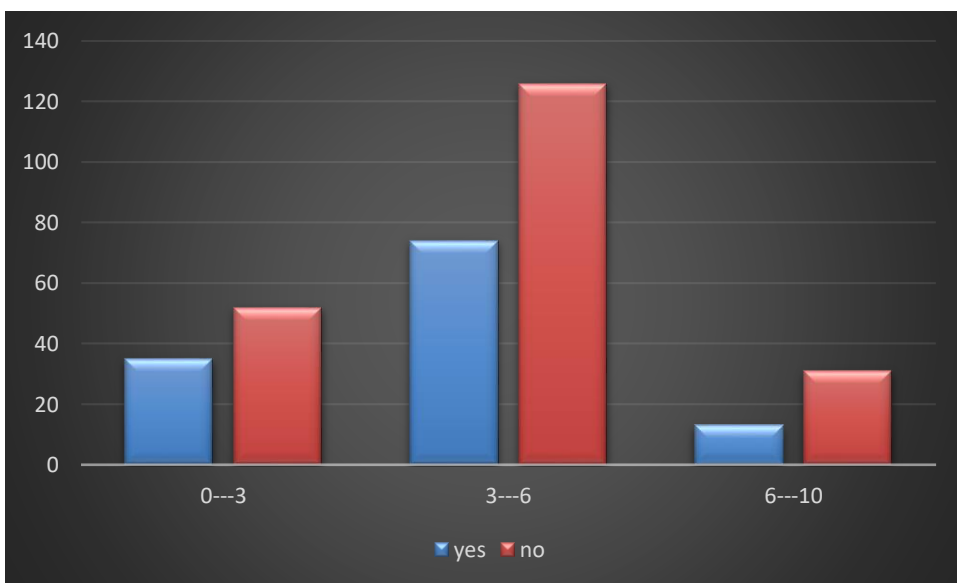


Figure 5 : influence of pathological history on pain management

The study of the relationship between the intensity of pain and other socio-demographic and management factors concluded that there was a statistically significant difference for the level of studies ($p < 0.001$). However, in the association of age, sex and pathological history, no correlation was found.

Evaluation of the effectiveness of the treatment:

Pain assessment was performed in 66.4% of patients versus 33.6%. 60.4% remained in moderate pain 1 hour after the introduction of analgesic treatment, 26.3% presented mild pain and 13.3% remained in severe pain.

Discussion:

Pain is an unpleasant, sensory experience associated with present or potential tissue damage, or described in terms of such damage (1). This pain as it was well defined by the IASP, remains an objective, multidimensional, and multimodal phenomenon. Therefore, the existence and impact of this pain must be systematically and imperatively assessed from the first contact in all patients.

Its emergency management must be effective and everything must tend to eliminate it or at least to make it tolerable and without even waiting for the search for the cause which may take time or even not feasible in the UAS.

The evaluation is an essential step in the establishment of analgesic treatment and its possible readjustment since it allows the doctor to judge the effectiveness or not of this treatment.

Pain can be rated by one-dimensional scales. EVS which is a categorical scale in five Qualitative (0 = no pain, 1 = mild pain, 2 = moderate pain, 3 = severe pain, 4 = excruciating pain) and is achievable in more than 94% of cases in medicine emergency (3, 4, 5). In our study, the simple verbal scale was used in 96% of patients.

The Simple Numerical Scale (ENS) assesses the intensity of pain by allowing the patient to choose an ours between 0 and 10 and correlates with the pain experienced (6, 7). It is a scale widely used in intra-hospital emergency medicine, achievable in this context in 85 to 89% of cases (3,4). In our case series, the simple numeric scale was used in 92.4% of patients. Finally, the visual analog scale (VAS) which is made up of two sides. One for the patient, representing a continuous line whose two ends are respectively marked: no

pain and maximum pain imaginable. The other side has millimeter graduations seen only by the caregiver.

The position of the cursor mobilized by the patient makes it possible to read the intensity of the pain, which is measured in mm.

Studies carried out in emergency medicine have shown a feasibility rate of more than 83% in hospital and 87% in out-of-hospital after a period of training of nursing staff (3,4). In our study, VAS was used in 72.4% of patients. This evaluation was made in our series by internal doctors and emergency doctors.

Factors influencing pain:

Prescribing factor:

According to a study carried out in Tunisia, two out of three doctors questioned did not have a specific protocol for the department and 44% of doctors working in emergency medicine had no training in the treatment of pain in emergency situations. (8). In addition, a national survey carried out in 2004 among mobile emergency and intensive care unit physicians revealed a major knowledge gap concerning the management of severe acute pain, both from the point of view of its evaluation. objective than the therapeutic strategy to be undertaken (9). In our study, the professional status of the prescriber significantly influenced the intensity of pain after treatment, mild pain <3 was observed in 74.74% among residents against 25.59% among emergency physicians.

Patient factors: Several factors are involved in the influence of pain, among these factors we describe age, sex and cultural factor.

According to studies, age may have an important role in pain perception and that there is a difference in pain threshold depending on age (10,11). Again, a study carried out in the emergency room of the Ibn Rochd University Hospital in Casablanca reports that there is a difference in the pain threshold according to age and that the majority age group was 45 years and over with a percentage of 51.7 % (12). In our study, age significantly influenced the intensity of pain, which is consistent with results obtained in the literature. Indeed, the pain was more intense in the patients whose age group was (15-30) and decreased the older we got in age.

Several experienced studies have shown that the threshold for pain perception and tolerance is lower in women (13,14). Another study carried out in the emergency room of the Ibn Rochd University Hospital in Casablanca reports a slight male predominance of 53% with a sex ratio of 1.11 (M / F) (12). In our study, the gender of the patients did not influence the intensity of the pain.

Several studies have found that ethnic origin and socio-cultural variations could affect the patient's judgment of pain intensity and even partially influence assessment decisions and the time of consultation (15,16). Also, a study found that in illiterate people, the pain was judged to be intense to very intense in 54.4% of cases and mild in 9.1% of cases (12). In our study, the level of study of the patients significantly influenced the intensity of the pain since the latter was more intense in academics and patients with a high school level and this could be explained by a difficulty in assessing pain in patients of low cultural level.

Conclusion:

Pain is a significant reason for consultation in the emergency room of the tertiary hospital in Casablanca. $\frac{3}{4}$ of patients have severe pain on admission. The "pain" symptom can be underestimated in its severity given the workload of emergency room practitioners and can mask life-threatening pathologies. Links in the management of pain require a self-assessment with an objective critical analysis in order to improve the management and standardize it. In fact, the pain assessment methods used by practitioners remain essentially subjective, the circuit of monitoring patients with pain is engulfed in the mass of untimely flow of emergency patients. Unfortunately, pain can be neglected and insufficiently managed regardless of the age and condition of the patient.

From this study, it appears that there is insufficient pain management in the emergency departments of the tertiary hospital in Casablanca. These results should encourage healthcare staff and public authorities to step up efforts to effectively combat pain, first with a better a priori assessment favoring listening to the patient, the pain being eminently subjective.

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