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Evaluation of the prescription of level III analgesics at the Rabat University Hospital

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ABSTRACT: Pain is "an unpleasant emotional and sensory experience associated with present or potential tissue damage or described by the patient in such terms". This definition of pain given by the International Association for the Study of Pain (IASP) makes it an "alarm symptom" that must be addressed. However, despite multiple WHO recommendations, analgesics in general and morphine in particular are not always used wisely. The main objective of this work was to evaluate the prescribing practices of Level III morphine analgesics in the Rabat University Hospital and the factors associated with this prescription. Patients and methods: This is a descriptive cross-sectional study of knowledge of attitudes and practices (K-A-P study) carried out between March and October 2013 with the doctors of the University hospital of Rabat. Results: A total of 254 physicians were interviewed. The mean age was 31 years ± 5 years with a sex ratio (M / F) of 0.83. Ten hospital structures were involved. Physicians surveyed were residents (61%) and medical specialists (16.5%). The sample consisted of 23 medical and odontological specialties. Concerning pain management, 94 doctors (37.7%) reported having undergone previous training. Pain is a very common (54%) and usual (26.8%) reason for consultation. Prescribing of Level III morphine pain relievers was common in (42.4%) of physicians. And 39 (36.4%) hold a stick book. The main reasons for not prescribing morphine, according to non-prescribers, were insufficient training (54.4%), fear of adverse effects n (40.1%), fear of a possible dependence n , 2%), the fear of overdose n (17.6%). In multivariate analysis, the factors associated with a prescription of the morphine analgesics were senior doctor (OR = 4.01), p = 0.01), medical specialty practice (OR = 4.65), p = 0.002) or anesthesia resuscitation (OR = 62.98 p <0.001) and follow-up of previous training (OR = 2.70, p = 0.01)
Conclusion: The results of this study reveal a lack of physician training on pain management and a low rate of adverse event prevention.

Key words: Morphine analgesic, pain, KAP study

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I. INTRODUCTION

For a long time considered as "normal" symptom, the evolution of the mentalities of the health professionals allowed to give to the pain its right value of "alarm" symptom that must be fought. In spite of the many rules concerning the prescription of analgesics proposed by the World Health Organization (WHO), the medicinal management of pain remains a problem. There are several types of pain and each type has specific characteristics and treatment [1].In addition to problems related to the choice of the drug and its dosage, prescribers often face relative efficacy and sometimes restrictive side effects.

Morphine and all the hemisynthetic or synthetic derivatives of this alkaloid represent the products found at "Levels II and III of the WHO". They are used in the treatment of moderate to severe pain [1]. Especially in the context of nociceptive pain secondary to a painful stimulation at peripheral receptors and / or neuropathic pain related to a lesion of the nervous system [2]. Their treatment is different. In recent years, several studies have revealed the low use of opiates for the treatment of severe pain [3]. The main reasons for this are based on adverse effects, population perception and risk of drug abuse [1,4,5]. In Morocco, according to the Moroccan Association Against Pain, pain is very common but remains undervalued or unrecognized. While the morphine derivatives retain a small place in the therapeutic arsenal, peripheral analgesics and non-steroidal anti-inflammatory drugs (NSAIDs) are prescribed massively [6,7].

It is in this context that we proposed in this work to evaluate the knowledge, attitudes and practices of prescription of the morphine pain relievers of level III of the WHO by the doctors of the various structures and specialties of the Rabat University Hospital and determine the factors associated with this prescription.

II. PATIENTS AND METHODS

This is a descriptive, cross-sectional study of knowledge of attitudes and practices (C-A-P study) conducted for 8 months (March to October 2013) with the doctors of the Rabat University Hospital (RUH). The target population of our study consisted of doctors from different specialties who agreed to participate in the survey in the various hospitals of the RUH. A favorable agreement between the heads of departments and the physicians participating in the study was obtained by means of letters explaining the objectives of the study

The inclusion criteria consisted of being a doctor practicing within the CHU (including those belonging to other structures or coming from other cities but practicing at the CHU at the time of the survey), External medical students and others Health professionals and doctors not practicing at the CHU were excluded from this study. The survey involved a sample taken at random within each hospital of all hospital structures of the CHU. The data were then collected using an anonymous semi-open-ended questionnaire consisting of 20 items including the physician's socio-demographic data (age, sex, grade (general practitioner, specialist, resident, intern, teacher), specialty Medical, surgical or odontological, the seniority of exercise and the city of exercise (Rabat or Salé). Thereafter, data on previous training on pain management, the frequency of consultations in their daily practice with pain as a reason for consultation, and the type of pain they treat with a bearing morphine. The third part of the questionnaire was aimed at prescribers of morphine-type analgesics (possession of a stem notebook, frequency of prescription of morphine analgesics, prescribing procedures for initialization and renewal during chronic pain, association with Other dosage forms, dosage forms, dosage adaptations, modalities for evaluating the efficacy of the treatment with morphine, the adverse effects encountered and their management, the presence of a partner or d A painter referent in the list of their contacts.). The fourth part of the questionnaire was intended for doctors who did not prescribe Level III pain relievers with questions of how to deal with intense or rebellious pain and the main reasons for not prescribing morphine.

To maximize the response rate, the questionnaire was completed by the physician in the presence of the interviewer. However, in case of lack of time or unavailability, the questionnaire was left to the doctor and recovered when completed. The data were entered and analyzed using the SPSS 13.0 software. The results of the quantitative variables were expressed on average ± standard deviation and / or median-quartiles, while those of qualitative variables were expressed as a percentage and effective. In univariate analysis, the logistic regression model (input method) was used to look for factors associated with prescription or nonphysical morphine analgesics in Tier III. All of these variables were included in the multivariate analysis. The significance level was set at $p < 0.05$.

III. RESULTS

During this survey, 460 questionnaires were distributed to doctors, 254 were analyzed, which corresponds to a response rate of 55.2%. 146 questionnaires were not completed and 60 were partially completed. The average age of doctors was 31 years +/- 5 years with extremes ranging from 23 to 60 years and a sex ratio (M / F) of 0.83. The structures concerned by our survey were ten structures, including the Military Instruction Hospital Mohamed V (23.6%) and the IBN Sina hospital in Rabat (24.4%) (Table I). Physicians surveyed were residents in (61%) cases followed by medical specialists (16.5%). Our sample consisted of 23 medical, surgical and odontological specialties. Among the participants in this study, 103 physicians (40.7%) practiced a medical specialty, 98 (38.7%) a surgical specialty and 44 (17.3%) were resuscitators. Concerning the management of pain, 94 doctors (37.7%) said they had received training in this regard. These trainings were in the form of seminars (23.5%), workshops (8.6%) and university degrees (3.7%). In daily practice, pain was a very frequent reason for consultation, according to 135 doctors (54%), usual according to 102 doctors (40.8%) and non-existent to occasional among 13 doctors (5.2%). The type of pain treated with morphine analgesics was of cancer (27.2%), postoperative (18.5%), and anesthesia (10.6%) (Table II).

Prescribing of Level III morphine analgesics was reported by 107 physicians (42.4%), compared to 147 (57.6%) who never prescribed it. Among these prescribers, the stem notebook was held by 39 (36.4%) of the doctors surveyed. The methods of prescribing the level III morphine are described in Table II. The adverse effects of morphine dreaded by these doctors were respiratory depression (68%), constipation (41.1%), nausea and vomiting (39.25%). These intercurrent adverse effects were managed by doctors themselves in 71.9% of cases or sent to a referring physician in 27.1% of cases. Drugs preventing the occurrence of these adverse effects were systematically associated with 34.6% of the respondents.

147 of the physicians who did not prescribe pain relievers, in the presence of intense or rebel pain, the physicians interviewed sent their patients to a referral painter (36%), to a hospital structure in 17.6% of cases, to a senior physician in 15 , 6% of cases or a colleague in 10.2% of cases. However, 22.4% of the respondents took

care of them themselves, using level I or II analgesics. The main reasons limiting the prescription of Level III morphine pain relievers were inadequate training (54.4%), fear of adverse events (40.1%), fear of potential dependence (31.2%) or the fear of overdose (17.6%).

The univariate analysis showed that seniority of practice, senior doctor's degree, practice of a medical specialty or anesthesia resuscitation specialty, have undergone previous training on pain and when pain is a A very frequent pattern of consultation with physicians were factors associated with the prescription of Level III morphine analgesics in a statistically significant manner (Table III).

In multivariate analysis and adjusting on the sex of the practitioner, seniority of practice, sector of activity, city of activity and frequency of pain as reasons for consultation, only the rank of senior doctor (OR = (OR = 4.65, p = 0.002, 95% CI [1.785-12.13]] or anesthesia resuscitation (OR = 62.98, p <0.001, 95% CI [14.733-269.236] and follow-up of previous formation (OR = 2.70, p = 0.01, 95% CI [1.275-5.742] Factors associated with the prescription of Level III morphine analgesics in a statistically significant manner (Table III).

IV. DISCUSSION

Through this work we were able to take stock of the knowledge, attitudes and practices of prescription of the morphine pain relievers of the physicians of the Rabat / sale.

To obtain complete, rich and valid results we have collected our data in 10 structures of the CHU taking care to include doctors of different grades and different specialties.

In the daily exercise of doctors in our study, pain was a common or even frequent reason for consultation in more than 94% of cases. Yet 147 (57.6%) said they had never prescribed morphine.

Among the reasons for not prescribing morphine, we found insufficient training. Thus, 62.2% of our doctors have never had any training in pain management. This high percentage would undoubtedly have a negative impact on how they manage pain, distinguish between different types of pain, identify the appropriate drug strategy and above all adjust the dosage according to the patient. Especially when we know that 67% of the respondents say they do not have a referent of pain in their structures.

In two-thirds of the cases, doctors did not associate medicines to prevent the side effects of opiates. An obvious consequence of this attitude is the patient's reluctance to use morphine-based therapies, which may itself lead to the physician's. A study in South Korea found that 16.09% of patients refused to use morphine derivatives [8]. The main reasons for this resistance are the fear of side effects and the risk of dependence associated with opioid use. Thus, Weiran Liu et al (2014) reported in their study that side effects were the third barrier to prescribing morphine drugs [9]. This is quite close to the results of our study which ranks them second after the lack of training.

This fear is not a particularity of the physicians of the saline Rabat hospital, since it has also been reported in doctors of the Dakar University Hospital [10] as well as in French doctors [11]. In addition, oncologists have cited in several studies "fear" as their main brake on prescribing morphine [12,13]. However, this fear is irrelevant if the conditions of use (indications, dosage, rhythm) are strictly observed. All this illustrates the importance of training not only health professionals but also patients on the use of morphine and the treatment of pain [9].

The particular properties of morphine have caused them to be classified as narcotics and to limit their prescriptions on stem notebooks or to be administered only in hospitals. Our findings show that two-thirds of doctors prescribing morphine do not have stem notebooks. This would hamper the prescription of analgesics III and facilitate their substitution by analgesics of the lower levels. Our study also allowed us to raise positive points to reinforce. Thus, we found that the order of choice used for prescribing morphine painkillers in patients with pain was generally consistent with WHO recommendations. Indeed, in 78% of cases, morphine was prescribed as an analgesic relay in levels 1 and 2, and it was only in a minority of cases that they were prescribed from the outset without going through the lower levels. These figures are in favor of a fairly good compliance with the protocol for the management of pain defined by the WHO. This observation is all the more apparent since in 1998, a study carried out among 100 doctors of the same university hospital in Rabat reported that 15% did not follow the protocol [14]. The rate of membership almost doubled between the two periods. In addition, the same study found that only 3% of doctors had stem notebooks for prescription while our study reduced the holding rate to 37.5%. So there is a clear evolution between 1998 and 2013.

The effectiveness of morphine therapy was followed by a pain rating scale in 36% of cases, by clinical evaluation in 33% and by both in 31% of cases. This is a positive point, which must be emphasized, since in order to adapt analgesia to the needs of the patient, the pain intensity at rest and during pain stimuli must be regularly evaluated with measurement tools adapted to his state of vigilance [12].

Indeed, in the modern world, pain relief is considered the most basic of human rights. Therefore, specific measures must be taken to ensure adequate pain management in patients [15].

During our study we confronted many difficulties. Thus many doctors and head of department refused to participate in the investigation. Their main motive was mainly: "The prescription monopoly of morphine is

reserved for anesthetists who are resuscitators." In addition, some physicians answered both prescribers 'and non-prescribers' questions about morphine, which resulted in their questionnaires not being taken into account in order to avoid any confusion in the analysis of our results. The method of data collection was time consuming, which may be responsible for the low response rate. Indeed, since the investigator was waiting for the doctor to have a free time to complete the questionnaire; the latter in an emergency was filling up expressly, which is a potential source of bias. In addition, the partial filling of some questionnaires was a brake on the analysis.

V. CONCLUSION

In fact, this study reveals a low prescription of morphine painkillers by doctors. Fear of adverse effects and lack of training are the main reasons given for this. It must therefore be noted that despite the many recommendations made by the WHO and the learned societies, the proper management of pain remains a labyrinth for many physicians where they are not always found. The results of our study show a certain evolution in this field at the CHU of Rabat between 1998 and 2013. Would it be possible to generalize this evolution throughout the Moroccan territory when it is found that most doctors have never been trained on the management of pain and that consequently they most often prescribe analgesics of level 1 And 2 even if a higher step is required? Is it possible to attribute only the low rate of storing stem notebooks to the fear of adverse effects, or should the national policy for the control of pain and the regulation of morphine derivatives also be considered? Anyway, as long as doctors are not properly trained on the management of pain, and morphinics used wisely, patients will continue to suffer.

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Table I: Sociodemographic data of physicians surveyed

	n(%)
Age (years) *	31± 5,3
Sex:	
- Female	135 (53,1)
- Male	113 (44,5)
- Unspecified	6 (2,4)

Grade:	
- General practitioner	3 (1,2)
- Consultant	42 (16,5)
- Dentist	5 (2)
- Resident	155 (61)
- Internal	24 (9,4)
- Teacher	25 (9,8)
Exercise seniority (years) **	4 [2,8]
Specialties:	
- Medical	103 (40,7)
- Surgery	98 (38,7)
- Resuscitation	44 (17,3)
Exercice place :	
- People	247 (97,2)
- Private and public	7 (2,8)
City of practice:	
- Rabat	226 (89)
- Salted	22 (8,7)
- Other	6 (2,4)
Hospital of practice :	
- RHU	234 (92,1)
- Extra RHU	20 (8)

* Expressed on average and standard deviation
** Expressed as median and quartile

Table II: Procedures for the prescription of level III analgesics

N= 107	*n(%)*
Detention of a stick book:	
-No	65 (60,7)
-Yes	39 (36,4)
-Unspecified	3 (2,8)
Prescribing frequency of morphine:	
-Very common	19 (17,8)
- Usual	22 (20,6)
- Casual	41 (38,3)
- Exceptional	25 (23,4)
Prescription of morphine is initiated by you so:	
-Very frequented	9 (8,4)
- Frequent	12 (11,2)
- usual	18 (16,8)
- Rare	42 (39,3)
- Very rare	24 (22,4)
- Unspecified	2 (1,9)
Prescription of morphine is initiated elsewhere and renewal by you:	
-Very frequented	4 (3,7)
- Frequent	13 (12,1)
- usual	18 (16,8)
- Rare	30 (28)
-Very rare	37 (34,6)
- Unspecified	5 (4,7)

Method of prescribing morphine:	
- In relay with analgesics of level 1 and 2	80 (74,7)
- In combination with bearings 1 and 2	30 (28)
- outset	8 (7,5)
- Unspecified	5 (4,7)
Galenic forms of morphine used	
-Injectable	61 (57)
- Oral sustained release	53 (49,5)
- Oral immediate release	30 (28)
- Transdermal	25 (23,3)
Presence of a correspondent or a referring painter	
-No	68 (63,6)
-Yes	33 (30,8)
-Unspecified	6 (5,6)
Dosage adaptations of morphine by:	
- You	
- You refer it to a referring physician	78 (72,9)
-Unspecified	26 (24,3)
	3 (2,8)
How do you assess the effectiveness of your morphine therapy?	
- Using a pain assessment scale	38 (35,5)
- Based on clinical assessment	34 (31,8)
-Both	32 (29,9)
-Unspecified	3 (2,8)

Table III: Factors associated with the prescription of Level III analgesics

	Prescription of morphine		Univariate analysis				Multivariate analysis			
	No n(%)	yes n(%)	P	OR	CI 95% Inf	Sup	p	OR	CI 95% Inf	Sup
Sex:										
- Female	86 (63,7)	49 (36,3)	0,068	1				1		
- Male	59 (52,2)	54 (47,8)		1,606	0,965	2,673	0,145	1,892	0,803	4,458
Exercise Years	4 [2-7]	5 [3-10]	**0,037**	1,058	1,004	1,116	0,065	0,908	0,82	1,006
Grade:										
- Junior physician	115 (63,2)	67 (36,8)		1				1		
- Senior Physician	32 (44,4)	40 (55,6)	**0,046**	4,811	1,027	22,53	**0,01**	4,016	1,397	11,542
Specialties:										
- Surgical	58 (81,7)	13 (18,3)		1				1		
- Medical	77 (59,7)	52 (40,3)	**0,002**	3,013	1,501	6,047	**0,002**	4,654	1,785	12,133
- Resuscitation	6 (13,6)	38 (86,4)	**<0,001**	28,233	9,879	80,685	**<0,001**	62,982	14,733	269,236
Activity area :										
- Public	144 (58,3)	103 (41,7)		1				1		
- Private and public	3 (42,9)	4 (57,1)	0,421	1,365	0,639	2,917	0,089	3,161	0,839	11,911
City of practice										
- Rabat	133 (58,8)	93 (41,2)		1				1		
- Salé	11 (50)	11 (50)	0,424	1,43	0,595	3,437	0,42	1,626	0,499	5,301
Previous training										
-No	105 (66,5)	53 (33,5)		1				1		
- Yes	40 (42,6)	54 (57,4)	**<0,001**	2,674	1,581	4,523	**0,01**	2,705	1,275	5,742
Pain is a reason consultation										
-Very common	72 (53,3)	63 (46,7)	**0,046**	4,811	1,027	22,53	0,064	39,313	0,806	1916,6
- Usual	60 (58,8)	42 (41,2)	0,09	3,849	0,811	18,265	0,065	38,679	0,794	1883,2
- Exceptional	11 (84,6)	2 (15,4)		1			1			

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