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ORIGINAL ARTICLE

PAIN IN PATIENTS SUBJECTED TO HERNIOPLASTY DOR EM PACIENTES SUBMETIDOS À HERNIOPLASTIA DOLOR EN PACIENTES SOMETIDOS A LA HERNIOPLASTIA

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ABSTRACT

Objective: to characterize the profile of patients subjected to hernioplasty. **Method:** descriptive, cross-sectional study with quantitative approach, developed in a Hospital, at the Federal University of Sergipe with 50 patients, after the approval from the Research Ethics Committee of the Federal University of Sergipe, under protocol No. CAAE - 0353.0.107.000-11. The data were entered into SPSS software version 18.0. **Result:** it was found that 66% of the patients were male, mostly in the age group between 30 to 39 years, 20% single and 50% of the patients had previously underwent herniorrhaphy. Regarding the complaint of pain, 32% of respondents have moderate pain and in 6% of them it was severe, the surgical incision was the most painful complaint location in 62% of the respondents, and the locomotion difficulty was the main consequence of the pain in 34% of patients. In 78% of patient records there wasn't any kind of pain described. **Conclusion:** the inadequate management of painful phenomenon represents a serious problem for patients submitted to hernioplasty. **Descriptors:** Pain; Pain Measurement; Hernia; Analgesia.

RESUMO

Objetivo: caracterizar o perfil dos pacientes submetidos à hernioplastia. **Método:** estudo descritivo, transversal, com abordagem quantitativa, desenvolvido no Hospital da Universidade Federal de Sergipe com 50 pacientes, após a aprovação do Comitê de Ética e Pesquisa da Universidade Federal de Sergipe, CAAE - 0353.0.107.000-11. Os dados foram digitados no software SPSS versão 18.0. **Resultado:** identificou-se que 66% dos pacientes pertenciam ao gênero masculino, a faixa etária mais frequente foi entre 30 a 39 anos, 50% deles eram solteiros e 20% dos pacientes já haviam realizados herniorrafia anteriormente. Quanto à queixa de dor, 32% dos entrevistados apresentaram dor moderada e 6% intensa. A incisão cirúrgica foi o local de maior queixa dolorosa em 62% dos entrevistados e a dificuldade para deambulação foi a principal consequência da dor em 34% dos pacientes. Em 78% dos prontuários não havia registro da dor. **Conclusão:** o manejo inadequado do fenômeno doloroso representa um grave problema para os pacientes submetidos à hernioplastia. **Descritores:** Dor; Medição da Dor; Hérnia; Analgesia.

RESUMEN

Objetivo: caracterizar el perfil de los pacientes sometidos a la hernioplastia. **Método:** estudio descriptivo, transversal, con abordaje cuantitativa, desarrollado en Hospital de la Universidad Federal de Sergipe con 50 pacientes, después de la aprobación del Comité de Ética y Pesquisa de la Universidad Federal de Sergipe, sobre el protocolo: CAAE - 0353.0.107.000-11. Los datos fueron digitados en el software SPSS versión 18.0. **Resultado:** se identificó que 66% de los pacientes pertenecían al género masculino, el grupo de edad más frecuente fue entre 30 a 39 años, 50% solteros, 20% de los pacientes ya tenían realizados herniorrafia anteriormente. Quanto a la queja de dolor, 32% de los entrevistados presentaron dolor moderado y 6% intenso, la incisión quirúrgica fue el local de mayor queja dolorosa en 62% de los entrevistados, y la dificultad para deambulación fue la principal consecuencia de dolor en 34% de los pacientes. En 78% de los prontuarios no había registro de dolor. **Conclusión:** el manejo inadecuado del fenómeno doloroso representa un grave problema para los pacientes sometidos a la hernioplastia. **Descriptores:** Dolor; Dimension del Dolor; Hernia; Analgesia.

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INTRODUCTION

Acute pain is the most common complication in the postoperative period and depends on the size of the surgical incision, physiological, psychological and cultural factors, as well as having a significant correlation of its intensity with the type of surgery. The intensity of post-surgical pain results from pre-existing diseases, type and size of the surgical incision.^{1,2} The assessment of postoperative pain is important because if not treated properly it can contribute to the occurrence of comorbidities and chronic pain process, especially in patients undergoing hernioplasty.³

It is noteworthy that for proper pain treatment, bioethics principles should be involved in which are: avoid suffering, and not neglect the patient's pain. So that a violation of human rights does not occur it is necessary to listen to the patient's complaints, always keeping them informed and allowing them to participate in decision making regarding their treatment.⁴

In most hospitals, the concept of pain as the fifth vital sign is not a priority for the professional healthcare team.⁵ In addition, so there is an appropriate performance in managing the painful phenomena require knowledge and training of nurses for success in controlling pain.⁶ It is emphasized the importance of assessing pain as the fifth vital sign, in order to provide a better qualified care to the patient focused on the real needs and therefore promoting humanized care.^{7,8}

It should be noted that nursing is the health area category which lives in continuous shifts with the patients, therefore plays a key role in pain management which include: the evaluation of pain intensity, for the mitigating and aggravating factors, the use of pharmacological and non-pharmacological techniques for proper treatment of the painful process, and communication with the multidisciplinary team.⁹

In Brazil, pain confrontation in the context of healthcare is still undervalued because it is a topic often overlooked by healthcare professionals and health educators.¹⁰ It should be noted that the systematic evaluation of pain, implementation of protocols for analgesia and creating acute pain services are fundamental to improving the care provided to patients undergoing abdominal surgery.¹¹

An indexed national literature search was carried out and a similar study with that specificity was not found. Therefore, this research is justified by the necessity of knowing pain as an agent that can cause

complications in patients undergoing hernioplasty, and thereafter emerged the following questions: Is it possible to characterize the profile of patients undergoing herniorrhaphy and hernioplasty? Will these patients feel pain? Will they present complications of the painful phenomena?

Therefore, the objectives of this study were established, to characterize the profile of patients undergoing hernioplasty, identify the intensity of pain and to investigate the presence of complications arising from the painful process. It is expected that the results of this study may raise awareness among health professionals about the importance of pain and benefit future patients in the proper treatment of the painful phenomena.

METHOD

This is a descriptive transversal study with a quantitative approach, performed in the Hospital of Federal University of Sergipe, Aracaju/SE Brazil, fully integrated with the Unified Health System (SUS), which treats patients in the city of Aracaju in the interior of State and surrounding regions.

The sample consisted of patients undergoing hernioplasty from December 2011 to April 2012. Initially the number of patients undergoing this type of surgery was surveyed. After statistical calculation the minimum sample size of 19 hernioplasty was determined.

The sample was taken at random and consecutively for convenience, consisting of 25 patients in each surgical procedure, which met the inclusion criteria: being in their first postoperative day, over 18 years of age and signing the informed consent (IC), by the interviewee or legal representative.

Two data collection instruments were used, as detailed below: the first instrument contained demographic data, previous diseases, date of admission, date of surgery, hospital discharge and type of surgery performed. The second instrument consisted of information on vital sign values, analgesic usage, presence of post-surgical pain, local pain, pain consequences and the visual analog scale (VAS), consisting of a straight line without numbering in which the far left side indicates no pain and the right side the worst pain, reported by patients. This scale was chosen because of its ease of use and only requires little collaboration by the patient.

Data collection was as follows: documental analysis of patients who underwent hernioplasty was carried out, followed by a

semi-structured interview. During the interview patients were asked about the presence and complications of pain. For the identification of pain complaints, patients were requested to point out a vertical line at the location that corresponded to their pain on a visual analog scale (VAS).

At all stages of the research, Resolution 196 was of the National Health Council¹² was followed by data collection after the approval from the Ethics in Research of the Federal University of Sergipe, under Protocol No. CAAE 0353.0.107.000-11. The data were stored in a computerized database in the Statistical

Package for Social Sciences (SPSS) version 18.0, and presented through tables.

RESULTS

Assessment of 50 patients who underwent surgery was carried out, of whom 33 (66%) were males, 30-39 years of age, 12 (24%), from Aracaju 24 (48%), single 25 (50%), 24 (48%) had completed elementary school (Table 1).

Table 1. Socio-demographic features of patients undergoing hernioplasty at the Hospital of the Federal University of Sergipe, 2012.

Variables		n=50	%
Surgery performed	Hernioplasty	25	50
Gender	Male	33	66
	Female	17	34
Age group	20-29 years	7	14
	30-39 years	12	24
	40-49 years	11	22
	50-59 years	8	16
	60-69 years	8	16
	70-79 years	3	6
	Over 80 years	1	2
Marital Status	Single	25	50
	Married	21	42
	Widowed	2	4
	Separated	1	2
	Cohabitation	1	2
Education	Illiterate	5	10
	Elementary completed	24	48
	Elementary incomplete	7	14
	High school complete	2	4
	High school incomplete	12	24
Residence	Aracaju	24	48
	Greater Aracaju area	11	22
	Other Cities in Sergipe	15	30

Concerning previous diseases 14 (28%) patients had a history of hypertension, 33 (66%) had already undergone some type of surgery, of which 10 (20%) had undergone hernioplasty surgery (Table 2).

Table 2. Distribution of patients by health history at the Hospital of the Federal University of Sergipe, 2012.

variables		n=50	%
Previous diseases	Hypertension	14	28
	Diabetes and hypertension	1	2
	Heart disease and hypertension	1	2
	Others	4	8
	Not applicable	30	60
Previous surgeries	Yes	33	66
	No	17	34
Type of previous surgery	Hernioplasty	2	4
	Herniorraphy	10	20
	Cholecystectomy	1	2
	Hysterectomy	1	2
	Intestinal reconstruction	2	4
	Others	17	34
	No previous surgeries	17	34

It is possible to verify from Table 3 through 16 (32%) of the patients complained of mild pain and 3 (6%) severe pain, and the incision site was the major site of pain complaints 31

(62%) of patients and difficulty in walking was the main effect of the pain in 17 (34%) of those interviewed. As for pain registered in the medical records, we found that in 39 (78%) of cases there was no record and when there was it was done by doctor 3 (6%).

Table 3. Evaluation of patients undergoing hernioplasty at the Hospital of the Federal University of Sergipe, 2012.

variables		n=50	%
Pain	No Pain	14	28
	Mild Pain	17	34
	Moderate Pain	16	32
	Sever Pain	3	6
	Incision	31	62
Location of the pain	Others	5	10
	Not applicable	14	28
Consequences from pain	Difficulty walking	17	34
	Difficulty sleeping	8	16
	Nausea	2	4
	Vomiting	2	4
	Difficulty Breathing	3	6
	Difficulty walking, vomiting and nausea	3	6
Record of pain in the medical records	Showed no symptoms	15	30
	Yes	11	22
	No	39	78
Professional responsible for recording the pain	Resident doctor	2	4
	Resident Nurse	1	2
	Medical Student	1	2
	Doctor	3	6
	Nursing Technician	2	4
	More than one professional	2	4
	No Record	39	78

In Table 4 it can be observed that all of the patients used analgesic drugs for pain treatment, 30 (60%) using simple analgesics and anti-inflammatory drugs (NSAIDs) to control pain complaints, none of the patients used strong opioids.

Table 4. Distribution of patients regarding drug usage at the Hospital of the Federal University of Sergipe, 2012.

Variables		n=50	%
Analgesic Usage	Yes	50	100
	No	0	0
Type of Analgesic	Simple analgesics + NSAIDs	30	60
	Weak Opioid	2	4
	Simple analgesics +	18	36
	Weak Opioid		

As for changes in vital signs, in this study it was identified that 5 (10%) had stage I hypertension, 2 (4%) had tachycardia and dyspnea, and 11 (22%) hypothermia (Table 5).

Table 5. Evaluation of patient vital signs at the Hospital of the Federal University of Sergipe, 2012.

Variables		n=50	%
Blood Pressure	Excellent	12	24
	Normal	16	32
	Borderline	15	30
	Stage I Hypertension	5	10
	Stage II Hypertension	1	2
	Stage III Hypertension	1	2
Pulse	Normal	48	96
	Tachycardic	2	4
Respiration	Eupneic	48	96
	Dyspneic	2	4
Temperature	Normal	37	74
	Fever	2	4
	Hypothermia	11	22

DISCUSSION

The majority of patients were male. It is believed that the fact of men performing physical effort in some working activities compared to women, they become more susceptible to the development of hernias.

They are similar to data from this research the study of¹³ in which there was prevalence in male gender.

In this study 30 to 39 was the most common age group. For some individuals the period of greatest productivity occurs from the third decade of life, where some people due to

certain industrial activities are exposed to excessive physical exertion, which makes them prone to the development of hernias.¹⁴ It was not possible to do the association test between the type of activity performed by patients and the presence of hernias.

Most patients had only completed elementary school. Research¹⁵ shows that people with lower education levels have less effective painful process coping strategies, coupled with the fact that the socioeconomic conditions, caused these patients to seek public health services for the resolution of their health problem.

In this study 28% of respondents were hypertensive. Hypertension is a risk factor for pre-operative surgery in general. It is noteworthy that a small proportion of patients had post-surgery high blood pressure. The uncontrolled hypertension in the pre-and post-operative periods, as consequence, increases cardiac workload, increased risk of cardiovascular and brain disease. Nursing plays a crucial role in blood pressure monitoring and therefore the possibility of reducing these factors.

Regarding previous surgery 20% of patients had underwent herniorrhaphy. These findings show that a previous hernia repair is a recurrence risk factor, which could have been previously resolved by placement of a screen. Surgical treatment of hernias is a common procedure worldwide, but remains a challenge for surgeons. However, some improvements such as screen placement contribute to a significant reduction in morbidity and recurrence.¹⁶

As for pain intensity 32% of patients reported moderate pain and 6% severe. Severe pain can also negatively influence post-surgical patient evolution, treatment and recovery delays. Management of painful phenomenon adequately contributes to vital sign maintenance and avoids harmful side effects resulting from the pain process.¹⁷

Most patients used simple analgesics and NSAIDs for pain treatment. It is noteworthy that there are a variety of analgesic techniques and preventive treatment for acute postoperative pain: patient-controlled analgesia (PCA), neural blockades, multimodal treatment, which uses non-pharmacological and pharmacological therapies, and opioids for moderate to severe pain, however despite the benefits of using opioids, there are limitations to their use for fear of undesirable effects of these drugs.^{18,19} Despite the side effects of opioids, these are the primary pharmacological intervention for pain control

in hospitalized patients, especially for moderate to severe pain.²⁰

Another option for the treatment of postoperative mild to moderate pain is paracetamol which is systematically associated with opiates, it produces analgesia in these first 24 hours after surgery, without the need for administration of rescue analgesia.²¹ For the proper treatment of acute post-surgery, it is necessary for communication between health professionals, creating a pain unit, and establishing treatment protocols.²²

The surgical incision was the greatest site of pain complaints. Surgical trauma causes the release of inflammation mediators and algogenic substances which stimulate nerve fiber nociceptors and therefore increase the painful stimulus transmission. Post-operative pain in general is often proportional to the degree of free nerve ending stimulation and incision size. The greater the tissue injury, greater the post-surgical pain intensity.

Difficulty in walking was the main complication of patients in this study. The lack of mobility can increase risk for pulmonary diseases and thrombosis as a consequence. It is noteworthy that it is necessary for these patients receive adequate analgesia for pain relief and then be encouraged for early locomotion preventing comorbidities.

The results reflect an under reporting of pain and record such data are similar to the study⁹ in which investigated the presence of pain in trauma victims. It may be inferred that the lack of documentation of the phenomenon in this study displays an intriguing painful reality because it was believed that since it is a University Hospital it had recorded pain in a systematic manner by the healthcare team, however the few that existed were made by doctors and it was detected that there was only one record made by a resident nurse.

With regard to changes in vital signs, we found that 10% of subjects had hypertension stage I, 4% had tachycardia and dyspnea, and 22% hypothermia. Acute pain causes changes which are: change in vital signs, sweating, pallor, anorexia, nausea, vomiting, and physical and psychological discomfort. 6 It should be noted that nurses develop their continuous shift work with patients, and therefore plays a key role in the holistic assessment of patients undergoing surgery, in order to provide comprehensive health and humanized care.

CONCLUSION

The study conducted in patients undergoing hernioplasty revealed that 66% of patients were male, 24% in the age group 30-39, 50% single, 48% had completed elementary school. With regard to pain intensity, the interviewees showed moderate and severe pain, respectively, the incision was the most painful and walking was the main complication of the pain. The most widely used analgesic medications were simple analgesics and NSAIDs, no patient used strong opioids. It was also observed that there was a shortage of registries in the painful phenomenon respondents' records.

One limitation of this study refers to the sample size, however the data presented to portray the institution actually investigated in order that all criteria were followed in the proposed research methodology.

This study's results reveal the need for training of health professionals and students on the importance of the evaluation, registration and appropriate painful phenomenon management, in order to reduce risks of complications and physical and emotional distress in patients and their families. New studies are suggested in which the adequacy of analgesia is investigated.

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