70 - CARDIAC SURGERY IN ADULTS: EFFECTS OF ANALGESICS IN PERCEPTION PAINFUL

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INTRODUCTION

Cardiovascular diseases are among the conditions that contribute most to morbidity and premature mortality and are the main cause of death and disability to 2010, since they represent the highest costs in medical care (GUS; FISCHMANN, 2002; VILA; ROSSI; COSTA, 2008). It can be observed in young individuals, with a progressive character over the years and reaching a terminal stage of the disease before middle age (THOMÉ et al., 1996).

O Surgical treatment by revascularization myocardial has been effective in controlling symptoms, better heart function, prevention of myocardial infarction, physical recovery, psychological and social of patient and increase in life expectancy of indivíduos (VILA; ROSSI; COSTA, 2008).

Thus the pain is an experience virtually inevitable in the postoperative period and its amplification in this period is generated by a cascade of events, for nociceptive impulses from visceral and somatic structures, generating various organic dysfunctions (VALVERDE; ROSA; SANTOS, 2009). Acute pain following the installation of the tissue damage and usually disappears with the resolution of the causal process and despite warning function, produces intense effects on the nervous system that alter sensitivity to subsequent stimuli. When arising of cardiac surgery, pain manifested itself as moderate in several studies (XAVIER; COSTA; TORRES, 2005; FERREIRA; CARVALHO, 2006; GIACOMAZZI; LANF; MONTEIRO, 2006).

The control of pain through mode pharmacological is not as easy to achieve as it is thought, or for physiological or psychological conditions of patient (GAVITO et al, 1999). Thus pain assessment should be systematic, daily and reported in detail, seeking to patient satisfaction with the analgesia (PEREIRA; SOUSA, 1998; XAVIER; TORRES; ROCHA, 2005; LIMA et al, 2008).

The informations from pain due to heart surgery can positively influence the performance of the multidisciplinary team during the patient care through the administration of appropriate analgesics to minimize pain.

In this regard, starting from the assumption that analgesia directly influences the pain behavior, we aim in this study is investigate the analgesics administered and the postoperative pain in adult patients undergoing cardiac surgery.

METHODOLOGY

This is a prospective study with quantitative approach, approved by the Ethics Committee of UFRN (176/05). Was conducted in two hospitals in the city of Natal / RN that attend the patients undergoing cardiac surgery. We excluded patients with preoperative pain, cognitive changes and who not wanted participate in the study.

Data were collected from the physical therapy evaluation before and after surgery in patients undergoing cardiac surgery, while the measurement of pain was performed by numerical pain scale, which is in the range of zero to ten, where zero means absence of pain and ten the worst pain imaginable, and yet the pain phenomenon categorized as mild pain (1-3), moderate pain (4-7) and pain (8-10) (XAVIER, TORRES; REIS, 2006).

On first day of postoperatively (POD 1) in which patients complained of pain, it was assessed by numerical scale of pain and patients requested to refer to pain complaints from zero to ten points, being then the pain reported by the researcher.

The descriptive statistical analysis was used to characterize clinical and socio-demographic sample. The T test was used to compare the averages of pain intensity reported by patients.

The data were organized, tabulated and submitted to statistical analysis using SPSS version 15.0.

RESULTS

Were evaluated in the 1 th of POD, 87 adult patients undergoing cardiac surgery, these 69 (79.3%) complained of pain, 42 (48.3%) were male and 45 (51.7%) were female, mean age 45 ± 11 years; 42 (48.3%) patients had primary education. The white race predominated in 80 (92%) patients, 47 (54%) did not work. Regarding pre-existing diseases, 43 (49.4%) patients presented: obesity (31%), hypertension (26.4%), diabetes (9.2%) and chronic obstructive pulmonary disease (2.3 %) (COPD). The surgical procedures performed in the sample are shown in Table 1.

During surgery the incisions realized were: sternotomy (97.7%), posterolateral thoracotomy (1.1%) and anterolateral thoracotomy (1.1%). 71.3% of patients received general anesthesia associated with spinal cord injury.

Table 1. Surgical Procedures performed in adult patients undergoing cardiac surgery. Natal/ RN, 2009.

Procedimentos cirúrgicos	N	%
Coronary artery bypass grafting		
With CPB	12	13,8
Without CPB	30	34,5
Valve surgery		
Valve implantation	23	26,4
Valvuloplasty	5	5,7
Corrective Surgery		
Correction of PDA	4	4,6
correction of CIA	9	10,3
Combined procedures		
Valvuloplasty and CABG	1	1,1
Correction of PDA, VI e CABG	2	2,3
Total	**87**	**100,0**

CPB: cardiopulmonary bypass; PDA: patent ductus arteriosus; CIA: communication interarterial; CABG: coronary artery bypass grafting

In the immediate postoperative period to be evaluated in the intensive care unit (ICU), 54% of patients had two chest tubes and removal of these drains occurred in 24 hours to 72.4%. Among the patients who had postoperative complications (18.4%), hypotension was present in 5.4%.

Pain intensity was categorized as mild, moderate and intense for each type of analgesic administered in patients. The change in pain behavior is found in Table 2. It was observed that only four painkillers were administered alone, with predominance of paracetamol in 46% of patients and 4.6% of patients did not receive any kind of analgesic in the 1st POD.

Table 2. Pain behavior according to the distribution of types of analgesics administered in the postoperative period of cardiac surgery. Natal / RN, 2009.

Analgesics	n	%	PAIN			
			Absent	Light	Moderate	Intense
Not received	4	4,6	33,3	33,3	33,3	0,0
Paracetamol	40	46,0	22,5	35,0	27,5	15,0
Paracetamol associated with codeine	2	2,3	0,0	100,0	0,0	0,0
Dipyrone	14	16,0	21,4	35,7	35,7	7,1
Tilatil	2	2,3	0,0	0,0	50,0	50,0
Paracetamol and paracetamol associated with codeine	1	1,1	0,0	100,0	0,0	0,0
Paracetamol and dipyrone	9	10,3	11,1	22,2	44,4	22,2
Paracetamol and tilatil	7	8,0	28,6	14,3	42,9	14,3
Tilatil, dipyrone and Paracetamol	1	1,1	0,0	0,0	100,0	0,0
Paracetamol, dipyrone, paracetamol associated with codeine and tilatil	1	1,1	0,0	0,0	0,0	100
Paracetamol and tramadol	1	1,1	0,0	0,0	100,0	0,0
Paracetamol and toradol	1	1,1	100,0	0,0	0,0	0,0
Dipyrone e tramadol	4	4,6	0,0	25,0	0,0	75,0

The mean of intensity painful were compared between males and females and to be submitted to the T Test showed no statistical significance (p = 0.702), as can be seen in Table 3.

Table 3. Average painful intensity reported by patients undergoing cardiac surgery according to sex. Natal / RN, 2009.

Sex	N	Average painful intensity	*p*
Male	42	3,8 (±3,0)	0,702
Female	45	3,6 (±3,1)	

DISCUSSION

The relief of postoperative pain has been a constant challenge for health professionals involved in the treatment of patients undergoing cardiac surgery.

Attempting to use analgesics and verify its effectiveness among patients has led many researchers to compare various methods. The characteristics of pain have been evaluated according to the intensity through the use of multidimensional scales and the requirement for analgesics, serving as a parameter to determine whether the drugs used for relief of postoperative pain are effective (FONSECA; MANDIM; AMORIM, 2002; BILGIN; AKCALI; OGUZKAYA 2003; CONCHA et al., 2004; MATOT et al., 2004; OZYALCIN et al., 2004; XAVIER; TORRES; ROCHA, 2006).

In the study about analgesia after thoracotomy, it was found that the pain following thoracotomy is the most intense in the postoperative period, and long-term, with consequent reducing ventilation and limitation of cough (XAVIER; TORRES; REIS, 2006). Already in another study (FONSECA; MANDIM; AMORIM, 2002) with two types of analgesia in patients undergoing thoracotomy, comparing the realization intercostal blockade with bupivacaine associated with morphine with infusion of bupivacaine and fentanyl by a thoracic epidural catheter, in which it was found that the intensity of pain after surgery as measured by visual analogue scale was less than 4 in the two anesthetic procedures, having statistics difference between the two analgesic techniques.

In this study the lack of prescription painkillers, and its inadequate management, were observed among the patients studied, considering that the pain in the 1st POD presented with the behavior of light, moderate and intense.

It is important to highlight the treatment of pain through a multimodal analgesic approach, that utilize pharmacological and nonpharmacological methods. Pain should be controlled to prevent complications after surgery and promote a faster recovery and without suffering (LIMA et al., 2005).

CONCLUSION

The occurrence of pain was present in varying intensity, even with the use of analgesic regimens in the postoperative period. There was a variation of analgesic drug prescriptions which shows a deficiency in the consensus and use of protocols for control of postoperative pain. It takes a good initial assessment of pain, which will serve as a baseline for the trial of subsequent interventions.

It was not observed statistical difference when comparing the average of pain intensity between males and females.

This study highlights how it is indispensable the realizations an efficient conduct to minimize postoperative pain, thus assisting in physical therapy procedures.

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CARDIAC SURGERY IN ADULTS: EFFECTS OF ANALGESICS IN PAINFUL PERCEPTION

ABSTRACT

The aim of this study was to investigate the administered analgesics and postoperative pain in adult patients undergoing cardiac surgery. This is a retrospective study with a quantitative approach, approved by the ethics committee of UFRN (176/05). Were studied 87 patients undergoing cardiac surgery, and 42 (48.3%) were male and 45 (51.7%) females, mean age 45 ± 11 years. The instruments were a summary of therapy evaluation, consisting of socio-demographic and clinical patient data and the numerical pain scale, which ranges from zero to ten points, categorized as mild (1-3), moderate (4-7) and pain (8-10). The procedures were performed by the application of the instruments. Categorical data were subjected to descriptive statistics and the quantitative to the T Test, using SPSS version 15.0. The perception of pain was experienced and reported with magnitudes ranging from mild, moderate and intense on 1st day of postoperatively. Regarding analgesics administered was noted that only four analgesics were administered separately, with predominance of paracetamol in 46% of patients and 4.6% of patients received no analgesics. The mean of intensity painful were compared between males and females and to be submitted to the T Test showed no statistical significance. There was a variation of analgesic drug prescriptions which shows a deficiency in the consensus and use of protocols for control of postoperative pain. The pain was predominantly mild to moderate in the 1st POD.

KEYWORDS: pain measurement, cardiac surgery, analgesia, postoperative.

CHIRURGIE CARDIAQUE CHEZ LES ADULTES: EFFETS D'ANALGESIQUES DANS LA PERCEPTION DOULOUREUSE

RÉSUMÉ

L'objectif de cette étude était d'enquêter sur les analgésiques administrés et de la douleur postopératoire chez les patients adultes subissant une chirurgie cardiaque. Il s'agit d'une étude rétrospective avec une approche quantitative, approuvé par le comité d'éthique de UFRN (176/05). On a étudié 87 patients subissant une chirurgie cardiaque, et 42 (48,3%) étaient de sexe masculin et 45 (51,7%) femmes, en moyenne 45 ans ± 11 ans. Les instruments ont été une forme d'évaluation thérapeutique, comprenant des données socio-démographiques et cliniques des patients et l'échelle de douleur numérique, qui va de zéro à dix points, être léger (1-3), modérée (4-7) et douleur (8-10). Les procédures ont été réalisées par l'application des instruments. Les données catégoriques ont été soumis à des statistiques descriptives et les chiffres pour le test t, en utilisant SPSS version 15.0.A perception de la douleur a été expérimenté et rapporté avec des magnitudes allant de légère, modérée et sévère au jour 1 après l'opération. Pour les analgésiques administrés a été noté que seulement quatre des analgésiques ont été administrés séparément, avec prédominance de paracétamol dans 46% des patients et 4,6% des patients ont reçu aucune analgésiques. L'intensité de la douleur moyenne ont été comparés entre les mâles et les femelles à être soumis à l'essai T montré aucune signification statistique (p = 0,702). Il y avait une variation de la prescription de médicaments antalgiques qui montre une carence dans le consensus et l'utilisation des protocoles de contrôle de la douleur postopératoire. La douleur était essentiellement d'intensité légère à modérée de la POD 1st.

MOTS-CLÉS: mesure de la douleur, la chirurgie cardiaque, l'analgésie postopératoire.

CIRUGÍA CARDIACA EN ADULTOS: EFECTOS DE ANALGÉSICOS EN LA PERCEPCIÓN DOLOROSA
RESUMEN

El objetivo de este estudio fue investigar la analgesia y el dolor postoperatorio en pacientes adultos sometidos a cirugía cardíaca. Este es un estudio retrospectivo con un enfoque cuantitativo, aprobado por el comité de ética de la UFRN (176/05). Se estudiaron 87 pacientes sometidos a cirugía cardíaca, y 42 (48,3%) eran hombres y 45 (51,7%) mujeres, edad media 45 ± 11 años. Los instrumentos fueron una forma de evaluación de la terapia, que consiste en datos socio-demográficos y clínicos del paciente y la escala de dolor numérica, que varía de cero a diez puntos, clasificado como leve (1-3), moderada (4-7) y dolor (8-10). Los procedimientos fueron realizados por la aplicación de los instrumentos. Los datos cualitativos fueron objeto de la estadística descriptiva y las cifras a la prueba de T, utilizando SPSS versión 15.0. La percepción del dolor que se experimentó, se indicará con magnitudes que van desde leve, moderada y severa en el día 1 después de la operación. Para los analgésicos administrados se observó que sólo cuatro de los analgésicos se administraron por separado, con predominio de paracetamol en el 46% de los pacientes y el 4,6% de los pacientes no recibieron analgésicos. La intensidad media de dolor fueron comparados entre hombres y mujeres que se someterá a la prueba de T no mostró significación estadística (p = 0,702). Hubo una variación de la prescripción de fármacos analgésicos que muestra una deficiencia en el consenso y la utilización de protocolos para el control del dolor postoperatorio. El dolor era predominantemente de leve a moderada en la 1 ª DPO.

PALABRAS CLAVE: medición del dolor, cirugía cardiaca, analgesia, postoperatoria.

CIRURGIA CARDÍACA EM ADULTOS: EFEITOS DOS ANALGÉSICOS NA PERCEPÇÃO DOLOROSA
RESUMO

O objetivo deste estudo foi investigar os analgésicos administrados e a dor pós-operatória de pacientes adultos submetidos à cirurgia cardíaca. Trata-se de uma pesquisa prospectiva com abordagem quantitativa, aprovada pelo comitê de ética da UFRN (176/05). Foram pesquisados 87 pacientes submetidos à cirurgia cardíaca, sendo 42 (48,3%) do sexo masculino e 45 (51,7%) do sexo feminino, com idade média de 45±11 anos. Os instrumentos utilizados foram a ficha de avaliação fisioterapêutica, composta dos dados sócio-demográficos e clínicos dos pacientes e a escala numérica de dor, que varia de zero a dez pontos, categorizada em leve (1-3), moderada (4-7) e intensa (8-10). Os procedimentos foram realizados, através da aplicação dos instrumentos. Os dados categóricos foram submetidos a estatística descritiva e os quantitativos ao Teste T, no programa SPSS versão 15.0.A percepção dolorosa foi experienciada e referida com magnitudes variando entre leve, moderada e intensa no 1º dia de pós-operatório. Em relação aos analgésicos administrados observou-se que apenas quatro analgésicos foram administrados isoladamente, tendo predominado o paracetamol em 46% dos pacientes e que 4,6% dos pacientes não receberam qualquer tipo de analgésico. As médias da intensidade dolorosa foram comparadas entre os pacientes do sexo masculino e feminino e ao serem submetidas ao Teste T não observou-se significância estatística (p=0,702). Constatou-se uma variação de prescrições medicamentosas analgésicas o que demonstra uma deficiência quanto ao consenso e uso de protocolos para o controle da dor pós-operatória. A dor apresentou-se predominantemente de leve a moderada no 1ºDPO.

PALAVRAS CHAVE: medição da dor, cirurgia cardíaca, analgesia, pós-operatório.

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