

Pain Management Strategies For Post Operative Patients Within First 24 Hours At Kakamega County Teaching & Referral Hospital In Kenya

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Abstract: Managing acute postoperative pain is a major challenge for practitioners, given that more than 80% of patients report pain after surgery, and 75% report the pain as moderate, severe, or even extreme. The American Pain Society states that 'In more than half of cases, patients report not receiving adequate pain management following their procedure', which has raised concerns over the development of chronic pain. The objective of the study was to determine the pain management strategies at KCTR, Kenya. The study adopted a descriptive cross-sectional study which was carried out at KCTR, Kakamega. The participants in the study included all adult male and female patients who had undergone major surgical procedure within 24 hours post-operative at KCTR. The target population, (N) is 250. Purposive sampling method was used, meaning that only patients available during the data collection period and meets the inclusion criteria were included in the sample. Majority of the patients interviewed were aged between 31-40 years and most of the respondents were females accounting to 67(61%) of the respondents. All the respondents interviewed were Christians and worked in the informal sector. Most of the respondents 80(73%) reported that painkillers were given through intravenous. 64(59%) of the respondents were given general anaesthesia whereas 45(41%) were given regional block type of anaesthesia. The findings of this study have showed that post-operative pain management in the first 24 hours is not effective. It is imperative that post-operative pain is adequately managed to alleviate the patients suffering. In order to achieve this, the study recommends development of pain assessment tool, Sensitizing the nurses on the need of pain assessment, The hospital should make analgesic available for use by the patients, A similar study to be conducted using a larger sample size to improve generalizability.

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I. Introduction:

Managing acute postoperative pain is a major challenge for practitioners, given that more than 80% of patients report pain after surgery, and 75% report the pain as moderate, severe, or even extreme (Miller et al, 2011). The American Pain Society (APS) states that 'In more than half of cases, patients report not receiving adequate pain management following their procedure', which has raised concerns over the development of chronic pain.

Effective postoperative pain control is an essential component of the care of the surgical patient. Inadequate pain control, apart from being inhumane, may result in increased morbidity or mortality (Sharrock et al 2010). In a study by (Pallock et al 2011) while citing (Lennard 2010), reported that surgery suppresses the immune system and that this suppression is proportionate to the invasiveness of the surgery. Good analgesia can therefore reduce this deleterious effect.

Approach to pain management are different from clinicians and the working environment, (Boselli 2014), however an integrated approach to pain management including cognitive assessment, systematic administration of appropriate medications, education of both staff and patients, as well as routine assessment of pain is recommended in order to effectively manage post-operative pain (WHO, 2015).

The most severe post-surgical pain is believed to occur within the first 24 to 36 hours after the procedure during which, (Zernikow et al 2013) strongly recommends opioid and adjuncts use for effective pain management. This approach is based on WHO pain management model.

Another concept of post-operative pain management that has been in existence and rapidly gaining popularity is the multimodal pain management model. In this model different analgesics working on different pain pathways are administered at the same time to combat pain, (Rawal 2016).

Objective: To determine the pain management strategies at KCTR, Kenya.

II. Methodology:

The study adopted a descriptive cross-sectional study which was carried out KCTRH, Kakamega. The participants in the study included all adult male and female patients who had undergone major surgical procedure within 24 hours post-operative at KCTRH. The target population, (N) is 250. The sample size was determined using the Fischer's formula:

$$N = \frac{z^2 pq}{d^2}$$

N is the desired sample size.

z is the value from the standard; for a confidence level of 95%, z=1.96

p is estimated proportion of the population with desired characteristics

q is the proportion of population lacking the desired characteristics

d is the desired margin of error; in this case d= 0.05.

Thus,

$$N = 1.96^2 (0.5)(0.5) \div 0.05^2$$

$$= 385$$

For a population of less than 10000; the sample size is adjusted as follows

$$N_f = \frac{n}{1 + \frac{n}{N}}$$

$$= 385 / 1 + 385/250$$

$$= 385 / 2.54$$

$$= 151$$

Purposive sampling method was used, meaning that only patients available during the data collection period and meets the inclusion criteria were included in the sample. Data collection involved the use of structured questionnaire and record review. Assumptions of the study included all the interviewed patients would tell the truth regarding pain score and residual anaesthetics will not impair the patients' orientation when responding to the questionnaire.

Data analysis and presentation was done by use of excel where frequency distribution table, bar graph, pie chart and histogram were used in the presentation and interpretations. We received the ethical approval from MMUST IREC, informed consent was obtained from participants, confidentiality was assured to the participants and information obtained was kept safely.

III. Results

This study was carried out at KCTRH. The study targeted 151 participants but only 109 questionnaires were fully filled.

TABLE: 1.1 FREQUENCY DISTRIBUTION TABLE SHOWING THE DEMOGRAPHIC DATA

Socio-demographic data	Frequency(n=109)	Percentage (%)
Age 18-30	42	38.5
31-40	50	45.8
41-50	17	15.5
Gender: male	42	38.5
Female	67	61.5
Religion: Christian	109	100
Muslim	0	0
Others	0	0
Occupation: Formal	7	6.4
Informal	59	54.1
Unemployed	43	39.4

Majority of the patients interviewed were aged between 31-40 years. Of the 109 respondents, 42(38%) were aged between 18-30 years, 50(46%) were aged between 31-40 years and 17(16%) were aged between 41-50 years. Most of the respondents were females accounting to 67(61%) of the respondents whereas 42(39%) male. All the respondents interviewed were Christians majority of them which makes 59(54%) of the respondents worked in the informal sector, followed by 43(40%) who were unemployed and only a small number of 7(6%) were formally employed.

Table 1.2: FREQUENCY DISTRIBUTION TABLE SHOWING STRATEGIES OF PAIN MANAGEMENT USED AT KCTRH

EXPERIENCED	FREQUENCY(N)		PERCENTAGE (%)
Types of anaesthesia:	General anaesthesia	64	58.7
	Regional block	45	41.3
The types of post anaesthetic painkillers given in the first 24 hours.	Oral drugs	9	8.2
	Intra-venous drugs	80	73.3
	Others	20	18.3

Most of the respondents 80(73%) reported that painkillers were given through intra-venous, followed by 20(19%) who reported to be given through other means while a small number of 9(8%) reported to be given orally. 64(59%) of the respondents were given general anaesthesia whereas 45(41%) were given regional block type of anaesthesia.

IV. Discussion:

Most of the respondents were aged between 31-40 years showing a youthful population in which most of them reported severe to moderate pain in the first 24 hour. The relationship between age and pain perception was not established in this study however other studies have revealed that elderly patients reports less pain and that young ones often rate pain higher than anticipated, Dihle et al (2012).

Most of the respondents were female, majority had no formal employment. All of our respondents were Christian, Female gender, attitude, information status and education are often considered indicators of the patient's perception of power, Chung JW (2012). In our study, less pain intensity was reported by the poor and less educated or informed. This finding affirms the fact that these groups of patients are highly vulnerable and therefore needs greater attention. Also noted was the fact that the patients who received regional anaesthesia reported low pain incidences than those who received general anaesthesia. This is due to the fact that regional block prolongs the analgesic effects several hours after operation, Miller et al (2013).

The incidence and level of severity of pain reported in this study is higher than those from most Western and developed countries however a similar study done in china reported a 100% post-operative pain incident, Tsui et al (2012). The environment and culture may however explain the variance in the findings of these studies.

Majority of the respondents reported to have received intravenous analgesic in the first 24 hours, this is in line with WHO pain management recommendations. Majority of the patients however believed that the medications administered were not effective with most of them believing that the nurses never assess their pain . Availability of analgesics is also a factor that probably plays a major role in lack of effective pain management. This is because patients are made to buy pain medications and majority are poor and cannot afford effective but expensive drugs. Desk review also revealed lack opioid or stringent control measures that made it difficult for the nurse to administer the prescribed narcotics that are provided by the hospital.

V. Conclusion and recommendation:

The findings of this study has showed that post-operative pain management in the first 24 hours is not effective. It is imperative that post-operative pain is adequately managed to alleviate the patients suffering. In order to achieve this, the study recommends: Development of pain assessment tool, Sensitizing the nurses on the need of pain assessment, The hospital should make analgesic available for use by the patients, A similar study to be conducted using a larger sample size to improve generalizability.

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