Online ISSN: 2413-6096 ljmr.ly
Original Article

Anesthesia and pain management drugs used in Libyan hospitals and clinics.

Ghadah Rajab Alneli

Department of Anesthesia Faculty of Medical Technology, Surman ,Sabratha University Libya

Email : Medodi01@gmali.com

Abstract

Background: Pain management can pose multiple challenges in the acute care setting for hospitalists and front-line prescribers. The drugs used for the relief of pain in the surgical can divided into potent and mild analgesics. Objectives: Identifying the most important analgesics used in some Libyan hospitals and health centers.
Method: This study is a documentary survey and a description of the reality of the use of some narcotic drugs in Libyan hospitals. It has been conducted in seven Libyan cities (zwarah, al-jmail, Sabratha, al-zawia, Tripoli, misratah and benghazi) during the period of (2. 10. 2022 to 10. 12. 2022). The participants have been divided into two main groups (Patients and specialists group) in a total number of 115 participants (Male and Females).
Results: all the participants from the 1st group (Patients group) confirmed that they have taken one of the pain management drugs as one of the treatment plan prescribed by the physicians. The statistical analysis revealed that the most common drug of the pain management was paracetamol(58%) followed by Tramadul (30%) and finally Voltarine (12%).
Discussion and conclusion: Pain and its treatment are major public health issues that we face as a society today. Patients with chronic pain present a special challenge. When they have pre-existing pain and undergo an operative procedure, it becomes important to differentiate pre-existing chronic pain from new acute postoperative pain.

Key word: General Anesthesia, pain management, tramadol, Intravenous drugs, sedation assessment .

Citation. Rajab Alneli Ghadah , Anesthesia and pain management drugs used in Libyan hospitals and clinics.
https://doi.org/10.54361/ljmr.17-14
Received: 01/03/23accepted: 23/03/23; published: 30/06/23

Introduction:

one of its substantive recommendations is that clinicians "offer multimodal analgesia where the use of a variety of analgesic medications and techniques
combine with nonpharmacological interventions, for the treatment of postoperative pain.[7]

Paracetamol intravenous it is an effective analgesic and antipyretic. It is absorbed rapidly and well from the small intestine after oral administration.[8]
Tramadol is commonly referred to as an atypical centrally acting analgesic because of its combined effects as an opioid agonist and a serotonin- and noradrenaline-reuptake inhibitor, [9]
Although an effective analgesic, it may not provide adequate pain relief if used as the sole agent for the management of moderate to severe acute pain at the currently recommended doses.[10]

Objectives:

To determine the most important pain management drugs used by patient in some Libyan hospitals and health centers.

Methodology:

Study design:

This study is a documentary survey and a description of the reality of the use of some narcotic drugs and pain relievers in Libyan hospitals and some health centers. This section describes the various aspects of research project, including the design, the participants, the research instrument, and the data gathering procedure. It also provides a summary of the data.

Participants:

Pain management can pose multiple challenges in the acute care setting for hospitalists and front-line prescribers. While their first priority is to optimally manage pain in their patients.
Generally, Pain and its treatment are major public health issues that we face as a society today.[1] Pain management presents multiple challenges in the acute care setting. There are more than 50 million surgeries performed yearly in an acute care setting.[2] It is estimated that more than 75 percent of those patients will experience moderate to severe pain 24 hours after the procedure.[3]
producing the unpleasurable sensation that is pain. Pain perception begins in the primary afferent sensory neuron in peripheral nerves. A-beta fibers are the largest peripheral nerves in diameter and respond to light touch and moving stimuli. Smaller diameter A-delta fibers and unmyelinated C fibers respond to painful stimuli and produce the experience of pain when stimulated Thus, they are referred to as primary afferent nociceptors.[4]
The phenomenon of sensitization is quite important in the perioperative period ,Sensitization may also occur centrally at the dorsal horn of the spinal cord. This can lead to the clinical phenomenon of allodynia (innocuous stimuli leading to pain) or hyperalgesia.[5]
Before prescribing pain medications, it is critical to conduct a thorough assessment of pain in the peri-operative period. This should start with knowledge of the past medical history and a detailed description of the pain in terms of location, duration, radiation.[6]
The American Pain Society (APS) recently published a guideline for the management of postoperative pain, and

Online ISSN: 2413-6096 ljmr.ly

The participants have been divided into two main groups (Patients group and specialists group) in a total number of 115 participants (Male and Females). The

Online ISSN: 2413-6096

types of analgesics, are the types of anesthetics and analgesics sufficiently available in hospitals in Libya, the factors on which the dose concentration of analgesics and anesthetics depend.

Statistical analysis:

To get into the final conclusion, statistical analysis has been applied to analyze all data supposed to be collected or obtained and then to make a final comparison using the significant value, statistical Package for Social Science (SPSS) V.21 has been used.

According to the total number [115] of the sample used in this study and after the statistical analysis, the current study has confirmed many of the important result that can be abbreviated as follows;

Distribution of patients group (I)

As shown in figure (1) describes the total number of the first group which were divided into males and females with a number of (24) and (34) with a representative percent of 41% and 58% respectively.

distribution of both groups was as following: the participants sample was chosen from the healthy and patients people with a total number of (58) males and females, by registration of all information about them such as age, sex and weight. Next to these procedures, special questionnairehas been given to (57) participants to answer special questions about the subject of this research.

This study has been conducted in seven Libyan cities (zwarah, al-jmail, Sabratha, al-zawia, Tripoli, misratah and benghazi) during the period of (2. 10. 2022 to 10. 12. 2022).

Research Instrument:

questionnaire was used in research instrument in this study. Divide the questionnaire into two group:

Group I: In the patient and healthy questionnaire, it contained 12 questions, including weight, age, gender, and health status.

Group II: In the doctors questionnaire, it consisted of 19 questions, the most important of which are the most common

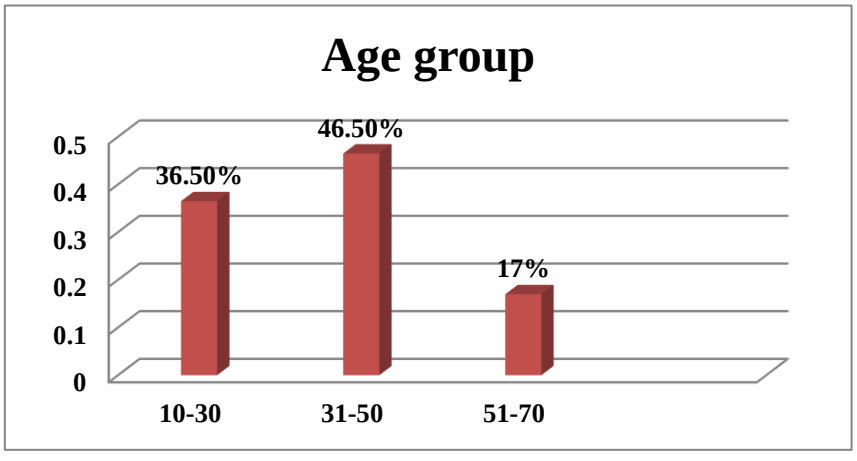


Figure (1) Patients group distribution according to age.

That the total number of samples whose data were recorded is (58), It is clear from

Figure (2)of which there are(24) males, with

Online ISSN: 2413-6096

a percentage of (41.5%), which is the lowest percentage, and (34) females, with a higher rate (58.5%), according to the study sample.

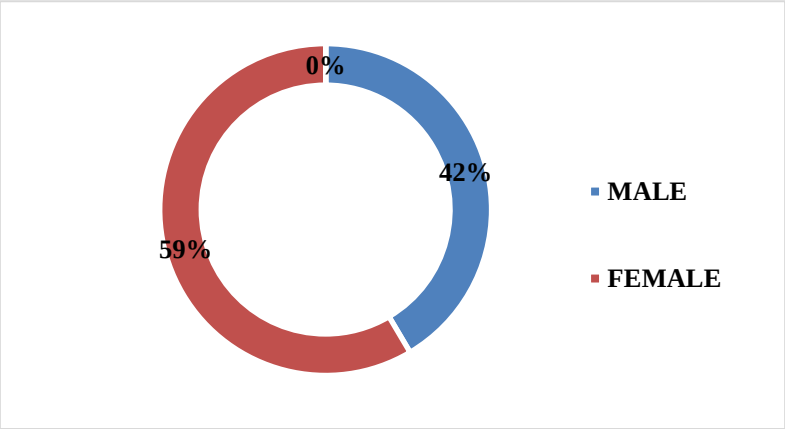


Figure (2) Distribution of the patients group according to sex.

As it is clear from the figure (3), the highest percent of the participants from the 1st group (42%) represents the patients with a weight of (71-80) Kg and the lowest percent of (8%) represents the patients who are weighting between (28-50).

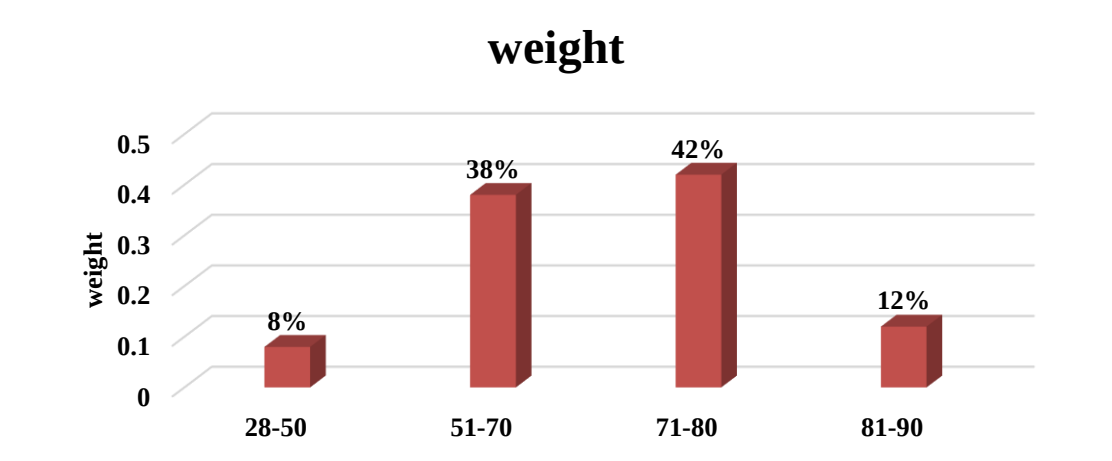


Figure (3) Distribution of the I group sample according to the weight.

We can see from the figure (4) that the highest percentage for age was (46.5%), while the lowest percentage was (17%). As for sex, the highest percentage for females (58.5%) and the lowest percentage for males (41.5%), while weight was the highest percentage (42%).and the lowest rate (8%). As we noticed, the highest percentage (58.5%) was for the female sex, and the lowest percentage was (8%) for the weight of 28-50.

Online ISSN: 2413-6096

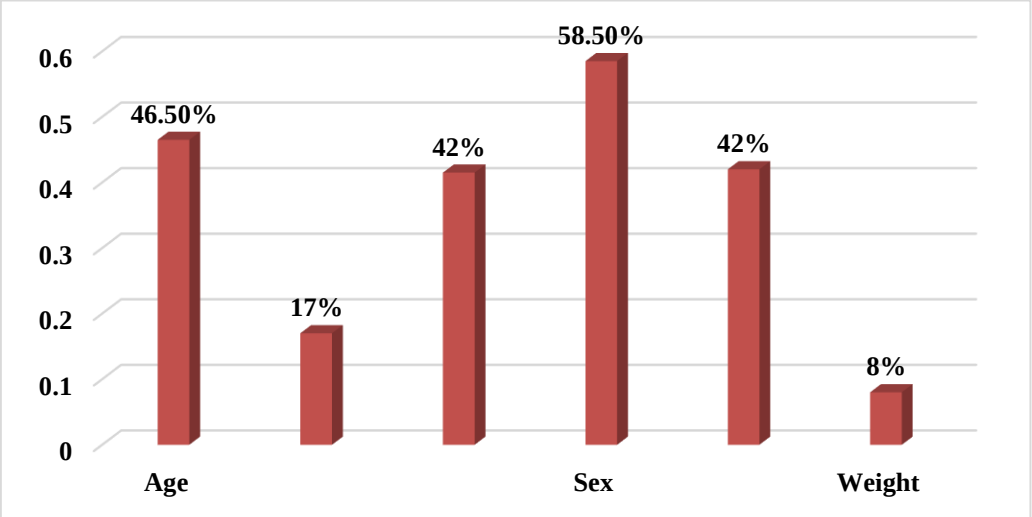
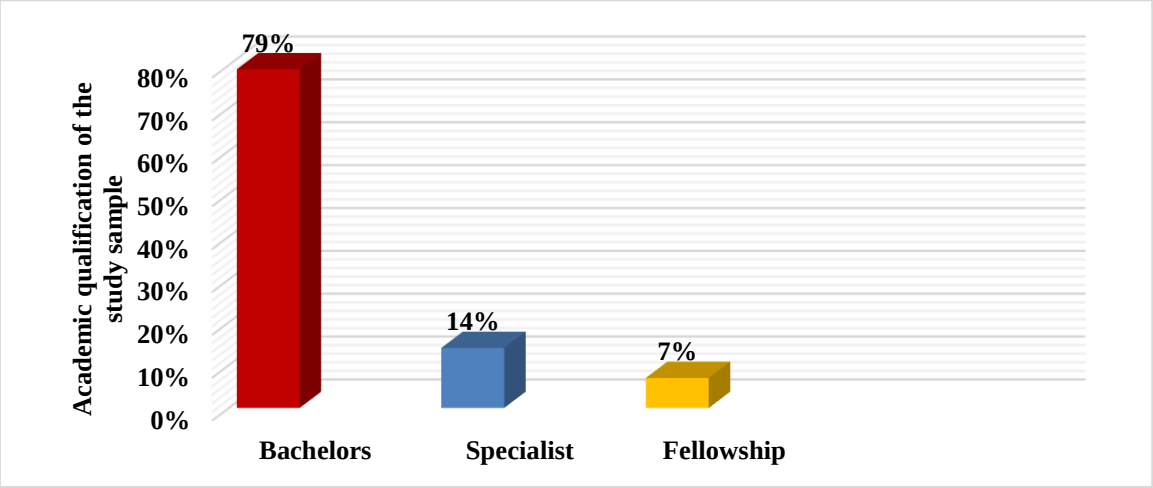


Figure (4) Distribution of the study sample according to age, sex, and weigh

Distribution of patients group (II).

The total number was57 divided according to the different specialists. As shown in figure(5), that the second group was containing the total number of the anesthesiologist and physicians who participated in this study by answering on the questionnaire. In details, we found that (58%) of them were having Bachelors degree,14% specialized physicians,21% general physicians and 7%were having Libyan board. Additionally,100% of them were anesthesiologists.



Figure(5) Distribution of group II (Anesthetics and physicians) according to the scientific degree.

It is clear from Figure (6) that the total number of samples whose data were recorded was (57) whose specialties were anesthesia, at a rate of (100%) according to the study sample.

Online ISSN: 2413-6096

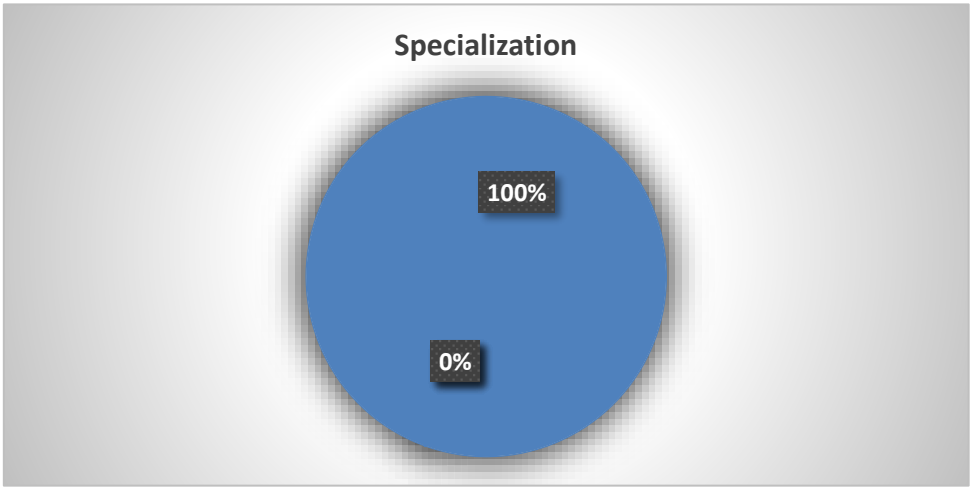


Figure (6) shows the study sample by specialization

The use of pain medication by patients

In our results, we revealed that (62,5%)57 participant from the patient knowledge that they received general anesthetic drug whereas (22 of them,37.5%) have been received epidural anesthetic drug during surgery procedure figure (6).

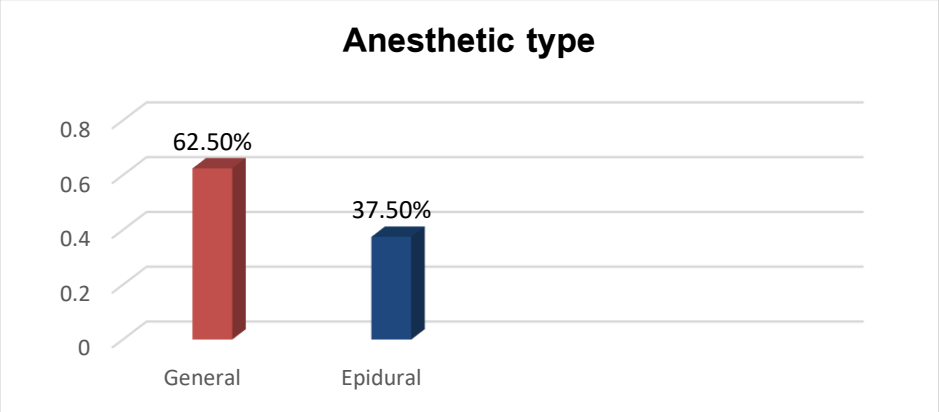
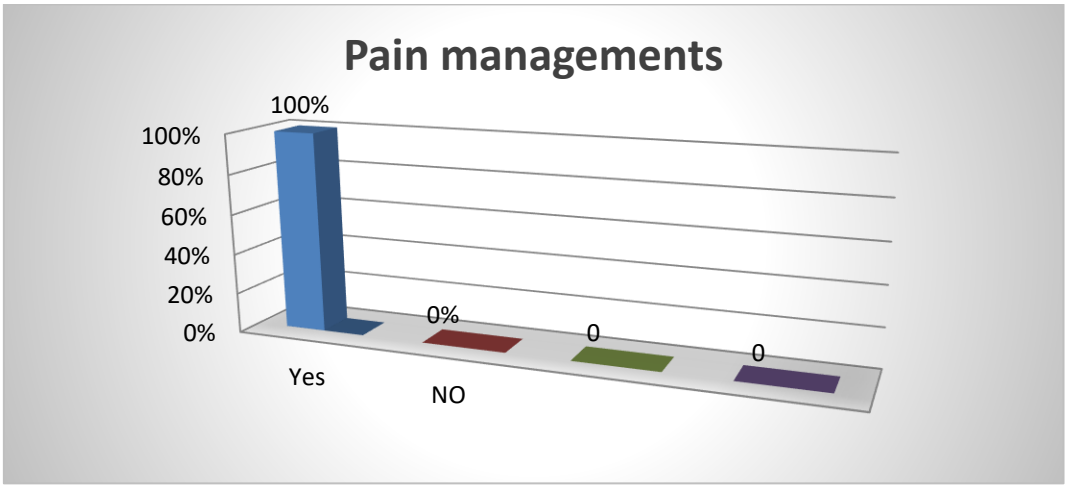


Figure (6) Distribution of the sample according to the type of anesthetic drug received during surgery procedure.

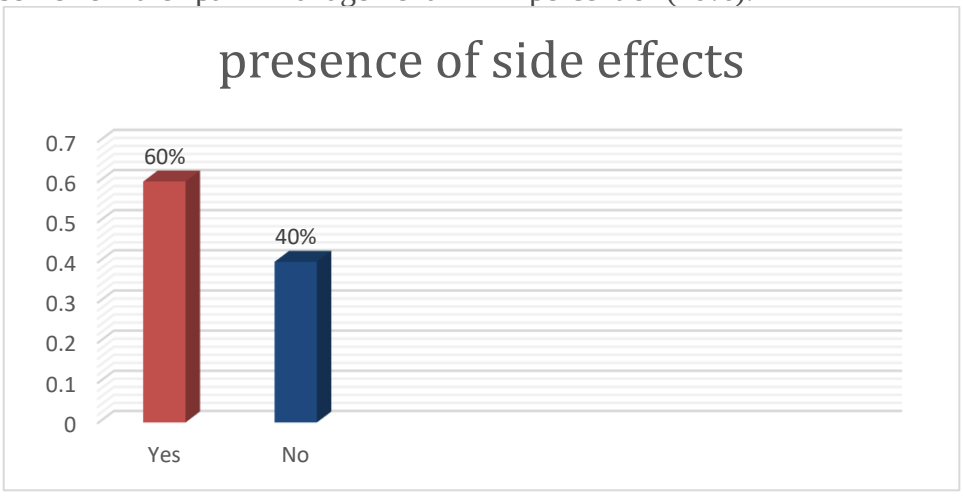
Online ISSN: 2413-6096

Moreover, all the participants from the (I) group (Patients group) confirmed that they have taken one of the pain management drugs as one of the treatment plan prescribed by the physicians. The percent was 100% out of 58 patient participated in this study who were included in (I)group figure (10) .



Figure(10) Distribution of the sample according to prescribing one of the pain management drugs during therapy.

Additionally, as shown in figure (11) the percent of the patients who have been suffered from some of the side effects due to using some of the anesthetic drugs and/or some of the pain management drugs was (60%) representing a number of 35 patients, whereas the number of patients who answered by (No) on the same question 23 with a representative percent of (40%).



Online ISSN: 2413-6096

Figure(11) Sample distribution depending on suffering from some side effects due to using some of the anesthetic drugs or pain management drugs.

On the other hand, with regard to the awareness of the patients about the mode of action of some anesthetic and pain management drugs, we found that (57%) of the patients did not have any idea about the action or the effect of these drugs on their bodies, whereas 25 patient from the participants (43%) clarified that they have some idea about the effect of such drugs on their bodies figure (12).

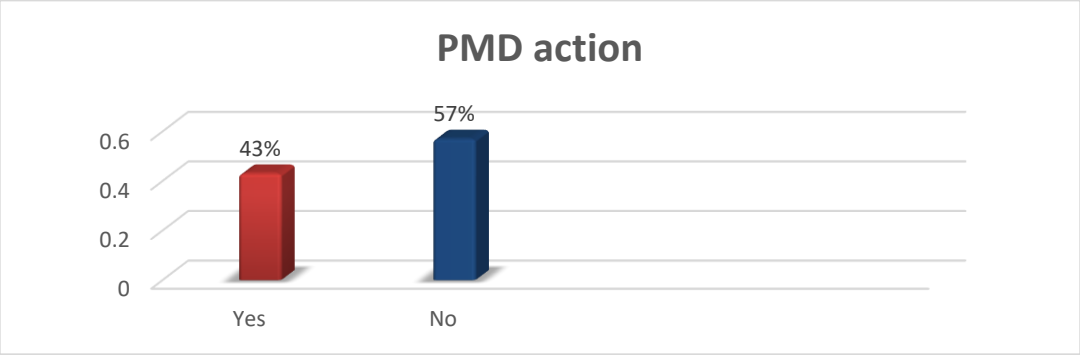
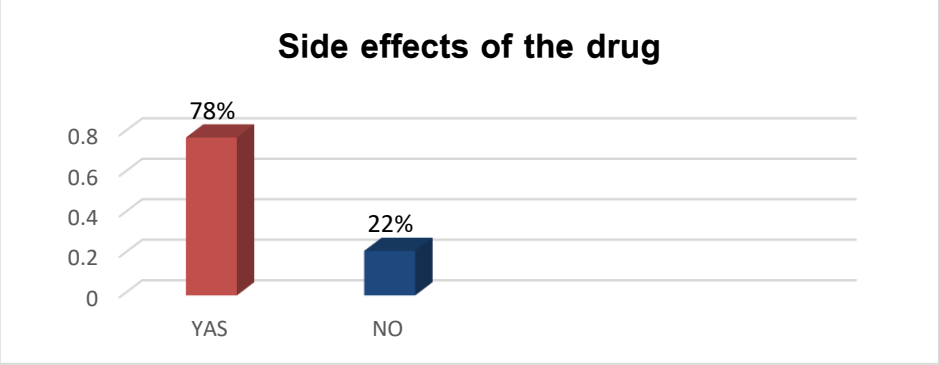


Figure (12) sample distribution according to patients aware of the mode of action of pain management and anesthetic drugs.

As shown in figure(13), we found that the percent of the patients who answered by (Yes) on the question whether the anesthesiologist or the physician has discussed with them the effect of the anesthetic drug before surgery was (78%) whereas others (22%) answered by (No).



Online ISSN: 2413-6096

Figure (13) Distribution about whether the anesthesiologist or the physician discussed with the patient the side effects of the drug**.**

The use of pain medication by specialists

With regard to the availability of the anesthetic drugs and pain management drugs, 46% of the specialists answered by (Yes) on the question asking about if there is a lack of some of these drugs, whereas 40% answered by (No) which is mean that there is no lack in these drugs and 14% have answered (Sometimes), Figure (14).

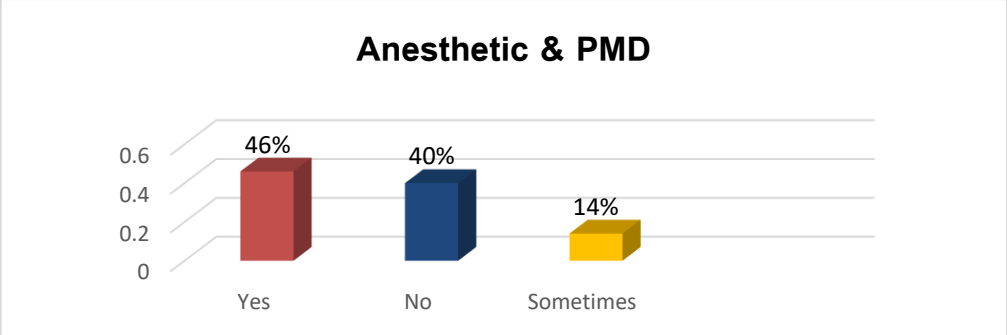


Figure (14) sample distribution according to the availability of the pain management drugs in health centers.

Common types of the pain management drugs available in health centers and hospitals were as shown in figure (15) The statistical analysis revealed that the most common drug of the pain management was Panadol (42%) followed by Tramadol (30%) then Paracetamol (16%) and finally Voltarine (12%).

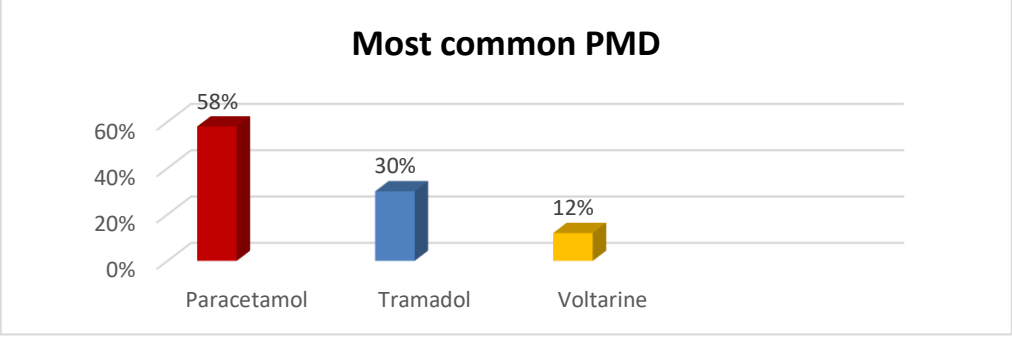


Figure (15) the most common pain managements in health centers and hospitals.

According to the answers collected from the specialists and physicians, we found that the most common way for using the drugs was throughout the injection method (91%) followed by using tablets or ointment (9%) and by other ways (0%) as show in figure (16).

Online ISSN: 2413-6096

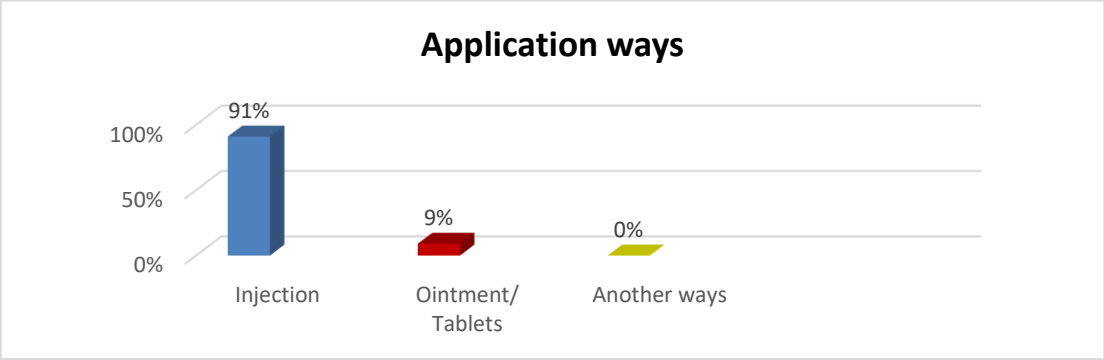


Figure (16) Application way for using the prescribed pain management drugs.

On the other hand, results of this study have revealed that the most common anesthetic drugs used in our health centers and hospitals were Propophol with a representative percent of (74%) followed by Ketamine (16%) and finally Sodium thiopemtal (10%) as show in figure (17).

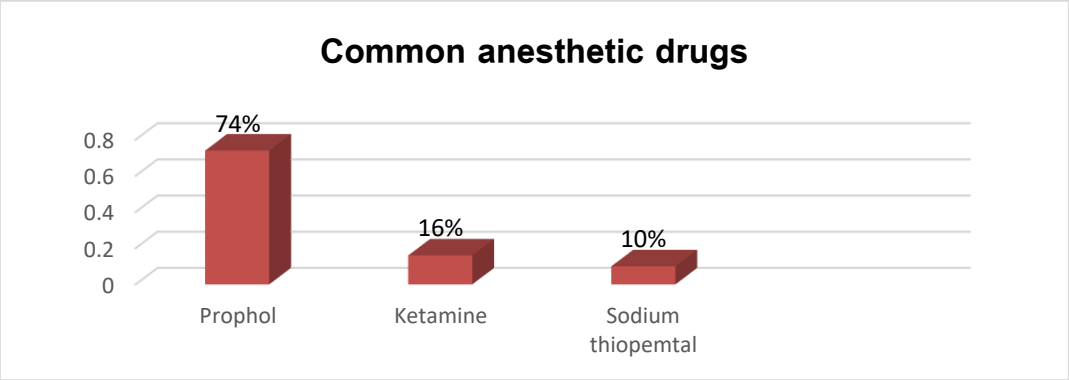
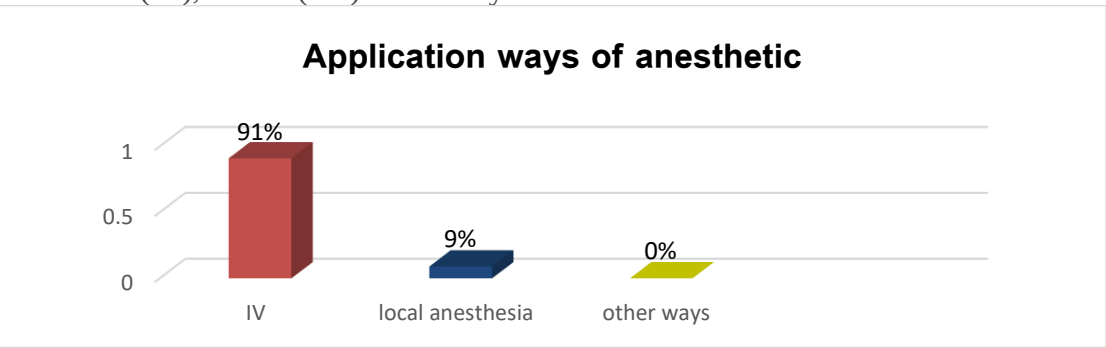


Figure (17) The most common anesthetic drugs used in health centers and hospitals.

We notice from Figure (18) that most of the answers were (Iv) by (91%) and their number was (52), while (9%) were only for the answer (local anesthesia) and there was no answer for other methods.



Online ISSN: 2413-6096

Figure (18) Application way for using the prescribed anesthetic drug.

Answers of the specialists about the presence of some side effect revealed that these side effects could be occur in a percent of (74%) as shown in figure (19) followed by (26%) who answered by (No).

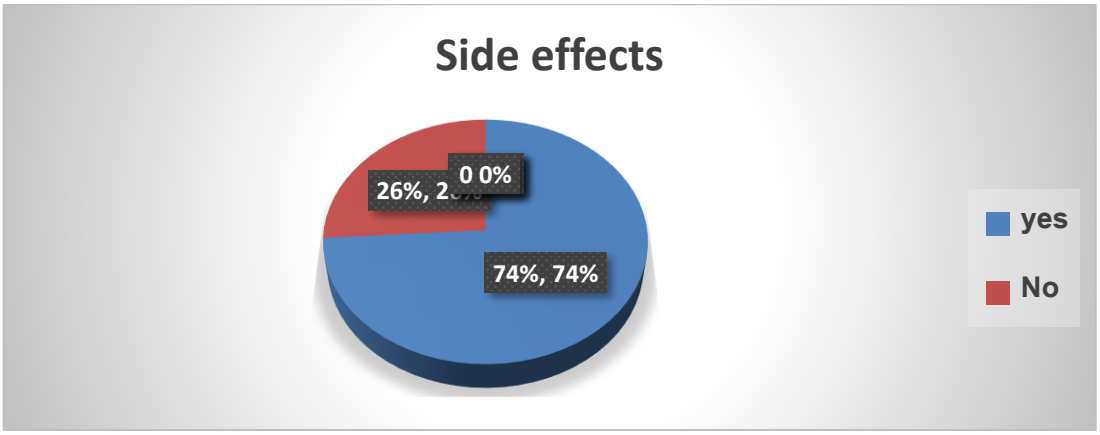


Figure (19) Distribution of the specialists answers about presence of side effects of using pain managements

Additionally, 46% of the specialists have answered by (Yes) on the question about whether they discuss and clarify the possible side effects of the anesthetic drug before using it or no followed by (40%) of them who answered by (No0 on the same question and (14%) answered by (Sometimes), figure (20).

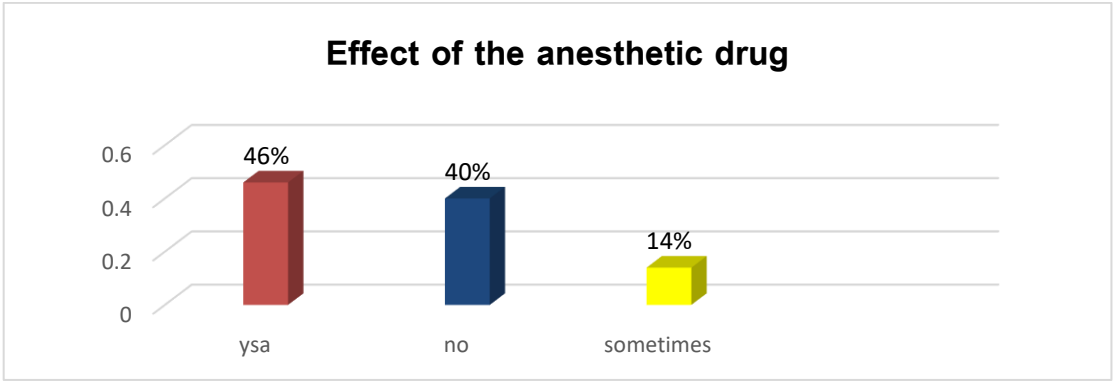


Figure (20) Percent of specialists answers about discussing the effect of the anesthetic drug with the patient before use.

Another question has been asked to the anesthetic specialists about whether there are some alternative drugs used in case of unavailable of the main anesthetic drugs commonly used in routine work. 56% of the answers were (Yes), whereas (36%) of answers were by (No) and (8%) were by (Sometimes).

Online ISSN: 2413-6096

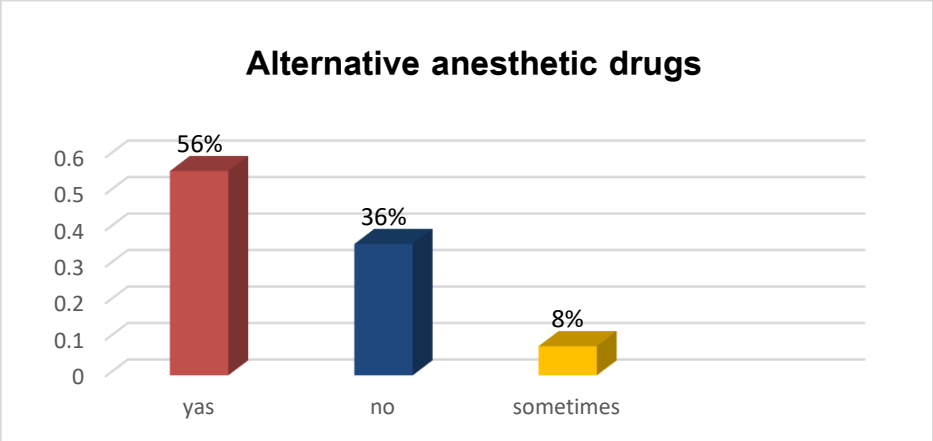


Figure (21) Results about whether there are alternative drugs used instead of anesthetic drugs.

Finally, with regard to the factors effecting on the doses prescribed to the patients from different types of anesthetic and pain management drugs, we found that all anesthesiologist or the physician have answered that the most effective factors in determining drug doses were the patient age, weight and healthy case with a percent of (100%) as shown in figure (22).

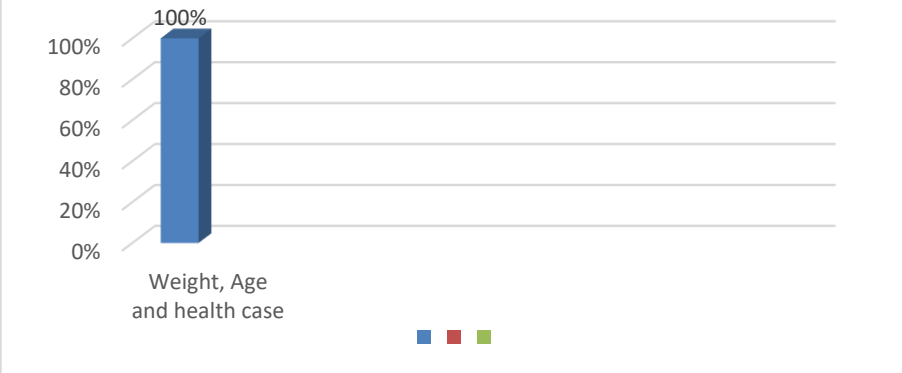


Figure (22) Factors effecting on the anesthetic dose or on the pain management drug.

Discussion:

First - Group (I) for patient and healthy:

The previous data showed the following: For the age group, the highest rate was (46.5%) between (31-50) years, while it decreased by (17%) between (51-70) years. As for gender, the highest percentage was for females (58.5). %) While males had a lower percentage, it was (41.5%). As for weight, the highest percentage was (42%) for individuals whose weight was between (71-80), while the lowest percentage was (8%) for individuals whose weight was (28-50). In

Online ISSN: 2413-6096

terms of diagnosing diseases, it was found that the highest rate was (59%), and the lowest rate was (41%), while surgeries had the lowest rate (1%) and the highest rate (99%), and the type of anesthesia had the highest rate (62.5%) for general and the lowest rate (37.5%) for epidural, while the percentage of prescribing analgesics was (100%), and in side effects the highest percentage was (60%) and the lowest percentage was (40%), and with regard to how analgesics work, the highest percentage was(57%) and the lowest percentage was(43%).The doctor explained the action of analgesics in the highest percentage (78%) and the lowest percentage (22%).

Second: Group (II) for doctor and anesthesiologists:

Through the personal data, the following was found: With regard to the academic qualification, the highest percentage was(79%) Bachelor's degree,while the lowest percentage was (7%) Fellowship, while the total percentage of majors was (100%)Also, the work of analgesics was (100%), in While anesthesia drugs had the highest percentage (46%) and decreased by (14%) while the highest percentage was for analgesic types (58%) for the analgesic type Paracetamol, while the percentage decreased for the type of analgesic Voltrine as it was (12%), and the method of use was the highest percentage (91%) for injections and the lowest rate(9%) for ointment and tablets, while potential complications are highest (74%) and decreased by (26%), and in the paragraph of analgesic and anesthetic effect the highest rate is (46%) and the lowest rate is (14%), while in drug alternatives Anesthesia has the highest rate (56%) and the lowest rate (36%) As for the factors on which the concentration of analgesic or anesthetic depends, they are weight, age, health status, and their percentage is (100%).

Conclusion:

This study has confirmed many of important results as mentioned in results and discussion chapters regarding using the anesthetic and pain management drugs in different health centers and hospitals by statistical analyzing some data that have been collect throughout special questionnaire containing number of important questions answered by number of patients and anesthiologists, physicians and medical care persons in different health centers located in three cities.

Recommendation:

1. The need to provide most of the anesthetics and analgesics used in centers and hospitals.
2. The interest of doctors and specialists to clarify the effect of anesthetics and analgesics for patients before use.
3. Providing alternatives to some anesthetics and analgesics in the event that known medicines are not available.

References:

1- International Association for the Study of Pain.

2- Gan TJ, Habib AS, Miller TE, White W, Apfelbaum JL. Incidence, patient satisfaction, and perceptions of post-surgical pain: results from a US national survey. Curr Med Res Opin. 2014;30:149-160.

3- Correll DJ. Perioperative pain management. In: McKean SC, et al., eds.

Principles and Practice of Hospital Medicine. McGraw-Hill; 2012.

4- Pozek JP, Beausang D, Baratta JL, Viscusi ER. The Acute to Chronic Pain Transition: Can Chronic Pain Be Prevented? Med Clin North Am. 2016;100:17-30.

5- Kosten TR, Haile CN. Opioid-Related Disorders. In: Kasper D, Fauci A, Hauser S, Longo D, Jameson JL, Loscalzo J,eds. Harrison's Principles of Internal Medicine,19th ed. McGraw-Hill 2015.

6- Gonzales MJ, Smith GT, Rabow MW, Pantilat SZ. Pain. In: Feldman MD, Christensen JF, Satterfield JM, eds. Behavioral Medicine:A Guide for Clinical Practice. 4th ed. McGraw-Hill; 2014

7- Chou R, et al. Management of Postoperative Pain: A Clinical Practice Guideline From the American Pain Society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society of Anesthesiologists' Committee on Regional Anesthesia, Executive Committee, and Administrative Council. J Pain. 2016;17(2):131-157.

8- Tzortzopoulou A, McNicol ED, Cepeda MS et al Single dose intravenous propacetamol or intravenous paracetamol for postoperative pain. Cochrane Database Syst Rev 2011; 10: CD007126