



THE EFFECT OF LOCAL ANESTHESIA ON THE PATIENT'S HEALTH

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Abstract: The aim of the study is to find out the extent of the effect of local anesthesia on the patient, as well as the extent of its efficacy and success in reaching the desired goal, which is the comfort of the patient first and foremost, and the extent of his complete satisfaction with this matter, and the extent of his complete satisfaction with the treatment plan followed by his attending physician. An electronic questionnaire was created through the Google Drive application, where this questionnaire was distributed to social networking groups (randomly) WhatsApp, where 700 answers were obtained from those (residents of the city of Mecca), out of a total of 600 questionnaires.

Keywords: role, anesthesia, radiation, patient, treatment plan.

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Introduction:

Local anesthesia is the anesthesia of a specific area of the body to perform minor surgery on this organ or part of the body, other than general or complete anesthesia⁽¹⁾⁽²⁾⁽³⁾. Local anesthetic works to numb a part of the body's surface, and can be used to numb any area of the skin, surgeries in the front part of the eye, and inside the nose, ear, throat, anus, and sexual organs⁽⁴⁾. Topical anesthetics are available in the form of ointment, cream, topical spray, and gel. Examples of local anesthetics include benzocaine, butampine, dibucaine, lidocaine, oxypropiquine, pramoxine, and tetracaine. All of these substances are derived from natural cocaine extracted from the coca plant, which is still used in some surgical techniques. There are several methods for local anesthesia, including surface anesthesia: Here, local anesthesia is applied to the surface to be anesthetized, either through a spray, as in anesthetizing the mucous membranes of the mouth before inserting the endoscope into the throat, or by placing an adhesive on the skin so that the anesthetic enters the layers of the skin and numbs them.

Layer anesthesia: The anesthetic is inserted, for example, through a needle into the layer to be anesthetized, so that the entire tissue in that layer of the body is anesthetized. It is an anesthesia that can be used in small and minor operations, and one of its benefits is that it is easy to apply, but it requires relatively large quantities of the anesthetic substance, so it is not suitable for anesthesia of medium and large operations. Interceptive anesthesia: It is represented by injecting the anesthetic near the nerve (not directly on it) feeding the area to be anesthetized. Its principle is to block (intercept) the pain information from reaching from the periphery (the organ being operated on) to the center (the spinal cord or the brain). It is a smart way to save on the amount of local anesthesia, enables us to anesthetize entire parts of the body, and is often used to anesthetize the extremities or parts of them such as fingers, hands, or feet. This method needs to know the path of the nerves that transmit sensory information so that it can be intercepted and the pain stopped. One of its disadvantages is that it is difficult to use in anesthetizing the torso or head. The anesthetic substance works to obstruct the movement of the electrical signal along the axon by obstructing the work of sodium channels in the nerve cell wall (rather than the axon wall), and thus the action potential does not form. This disruption leads to the separation of the limb from the center. The pain signal remains in the limb without exceeding the point of anesthesia and therefore is not perceived or felt by the brain. Conversely, the commands arriving from the brain to the limbs also do not reach, and thus the limb becomes paralyzed throughout the period of this disconnection. Local anesthetic is used to relieve pain and itching resulting from sunburn or minor burns, insect bites,

poison ivy, poison oak, and small cuts and scratches⁽⁵⁾. Local anesthetic is used in ophthalmia and in measuring visual acuity to numb the surface of the eye (the outer layer of the cornea and conjunctiva) in the following cases: surface tension measurement, performing a schmermer test, removing any foreign body from the upper part of the cornea and conjunctiva. The greater the depth and size of the foreign body, the greater the amount of anesthetic needed to numb the surface of the eye to remove the foreign body from the cornea and conjunctiva. In dentistry, local anesthesia is used to numb the oral cavity before using an actual dental anesthetic because it requires inserting a needle into the soft tissues of the mouth⁽⁶⁾. There are a number of general conditions that affect the choice of the type and method of anesthesia used in oral surgical operations. Either under local or general anesthesia, the dentist must study the indications and contraindications for each of the two methods before deciding to use one of them in a specific case. The reason for this is the poor choice of the type of anesthesia used. What is common is speed, and there are factors that control the choice of the type of anesthesia. In general, obese or morbidly obese patients are not suitable for performing surgical procedures under general anesthesia in a dental treatment chair. However, patients do not have the ability for such cooperate for certain reasons such as fear, apprehension, excessive nervousness, and panic. Mental deficiency or insanity, are general diseases that can decide the choice of the type of anesthesia. Any medical condition that causes a weakening of the ability to breathe or a failure to expand the airways is considered a contraindication for general anesthesia. Chronic bronchitis, emphysema, bronchiectasis, asthma, tuberculosis, or excessive smoking are all conditions that affect respiratory exchanges. In most patients with any type of heart disease, the blood vessels cannot handle the lack of oxygen or low blood pressure. Also, the antihypertensive medications that patients with high blood pressure take can cause two specific problems when using general anesthesia. Therefore, local anesthesia is preferred every time this is practical. Therefore, experts prefer to give anesthetic solutions. Topical medications that do not contain epinephrine for patients with cardiovascular diseases.⁽⁷⁾

2-Material and Methods:

This study started in (the holy city of Mecca in Saudi Arabia), began writing the research and then recording the questionnaire in March 2023, and the study ended with data collection in August 2023. The researcher used the descriptive analytical approach that uses a quantitative or qualitative description of the social phenomenon (**The effect of local Anesthesia on the patient's health**), This kind of study is characterized

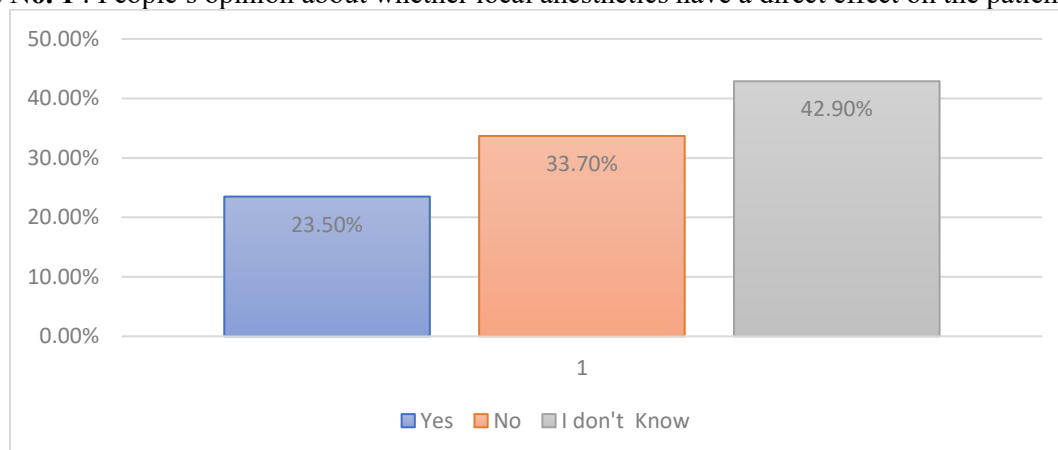
by analysis, reason, objectivity, and reality, as it is concerned with individuals and societies, as it studies the variables and their effects on the health of the individual, society, and consumer, the spread of diseases and their relationship to demographic variables such as age, gender, nationality, and marital status. Status, occupation ⁽⁸⁾, And use the Excel 2010 Office suite histogram to arrange the results using: Frequency tables Percentages ⁽⁹⁾. A questionnaire is a remarkable and helpful tool for collecting a huge amount of data, however, researchers were not able to personally interview participants on the online survey, due to social distancing regulations at the time to prevent infection between participants and researchers and vice versa (not coronavirus participation completely disappearing from society). He only answered the questionnaire electronically, because the questionnaire consisted of twelve questions closed, all of which were closed. The online approach has also been used to generate valid samples in similar studies in Saudi Arabia and elsewhere ⁽¹⁰⁾

3- Results:

Regarding the ages of the research participants, we found that the ages of 16-23 were 18.4%, 24-31 25.5%, 32-39 31.6%, 40-47 18.4%, 48-55 6.1%. As for the gender of the participants, males 20.6%, and females 79.4%. %, as for men's professions, they were as follows: student 19.6%, government employee 33.3%, private sector employee 17.6%, not working 27.5%, self-employed person 2%, as for the women participants in the research questionnaire, female students 18.3%, government employee 9.8 %, private sector employee 0%, self-employed businesswoman 2.3%, housewife 53.7%, private sector employee 15.9%, as for the nationalities of the participants: Saudi 94.7%, non-Saudi 5.3%. Regarding the first question: Do you know what local anesthetic is? The answer was, yes 87.8%, no 3%, and I don't know 9.2%. The second question was: Is local anesthetic used in all areas of the patient's body? The answers

were as follows: Yes 26.5%, No 38.8, I don't know 34.7%. The third question: In your opinion, there are types of local anesthetics? Yes 68%, No 4.2%, I don't know 27.8%. The fourth question is: Is local anesthetic used through needles only? The answers were yes 17.5%, no 62.9%, and I don't know 19.6%. The fifth question was: Does local anesthetic have an effect on the location of pain on the patient's body? Yes 72.2%, No 19.6%, I don't know 8.2%. As for the sixth question, it was about: Are all types of local anesthetics used surgically? Participants answered yes, 16.5%, no, 50.5%, and I don't know, 33%. Regarding the seventh question: Does local anesthetic have a direct effect on the patient's health? Yes, 23.5% answered, No, 33.7%, and I don't know, 42.9%. The ninth question was: Does the amount of local anesthetic given differ from one person to another during the operation? The answers were yes 85.4%, no 2.1%, and I don't know 12.5%. As for the question, it was: Do you have knowledge of how dangerous local anesthetics are to human life? Participants answered yes, 33%, no, 33%, and I don't know, 34%. The tenth question was: Do you feel tired after being given the local anesthetic? Yes 33.7%, No 38.8%, I don't know 27.6%. The eleventh question: Do you feel afraid while taking local anesthesia? Participants answered yes 55.7%, no 34%, 10.3%. The last question was: Does the specialized technician have a role in your tolerance for taking local anesthesia? 79.6% answered yes, 5.1% and no 15.3%. Through the results of the participants' opinion poll, we found that 87.8% of them are aware of what a local anesthetic is, and some of them are not aware of it at a rate of 26.5%, as evidenced by their answer that is it used in forestry? The majority of them (16.5%) said yes, while half of them (50%) said it is not used surgically. When asked about the risk to their lives, 33% answered yes, while 33% said no, and 34% said we do not know, and this is also further evidence of their knowledge and familiarity with local anesthetics. (figure No.1)

Figure No. 1 : People's opinion about whether local anesthetics have a direct effect on the patient's health



4-Discussion:

We conclude from this study that people's knowledge is still incomplete and limited about local anesthetics, their types, and how to use them, except for people who are specialists and knowledgeable about what local anesthetics are, their types, uses, and the extent of their danger to the patient's health.

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