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Investigation of causes of the patient's refusal for spinal anesthesia

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Abstract---Spinal anesthesia is an effective and routinely used technique in many operations. The frequency of spinal anesthesia preference is increasing with the growing number of peripheral vascular surgeries day by day. However, for various reasons, patients are refusing spinal anesthesia despite the recommendations of the surgeon and anesthesiologist. The causes of patient refusals for anesthesia have been investigated in various surgeries. However, the reasons for the refusal of patients who are going to have elective surgery with spinal anesthesia have not been examined. This study aimed to reveal the causes of patients' requests to not apply spinal anesthesia. Our aim is to increase the use of spinal anesthesia by focusing on the prevention of anxiety levels in patients before explaining spinal anesthesia, thus contributing to the adequate and effective management of clinical research and the reasons for patient refusal.

Keywords---Patient refusal, spinal anesthesia, anesthesiologist.

1. Introduction

Spinal anesthesia is an effective and routinely used technique in many operations. The frequency of spinal anesthesia preference is increasing with the growing number of peripheral vascular surgeries day by day. However, for various reasons, patients are refusing spinal anesthesia despite the recommendations of the surgeon and anesthesiologist. The causes of patient refusals for anesthesia have been investigated in various surgeries. However, the reasons for the refusal of patients who are going to have elective surgery with spinal anesthesia have not been examined. This study aimed to reveal the causes of patients' requests to not apply spinal anesthesia.

The study was performed in the vascular surgery clinic on patients who were going to have the operation with spinal anesthesia between March 2018 and November 2018. The study included patients over the age of 18 who did not have

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a communication problem with the researcher. The causes of spinal anesthesia refusal were shown as "indirect" for 83 (86.5%) and expressed as "direct" by themselves in 13 (13.5%) of the patients. The most common indirect reason for the refusal of spinal anesthesia was found to be 'being frightened' (67.7%). Our aim is to increase the use of spinal anesthesia by focusing on the prevention of anxiety levels in patients before explaining spinal anesthesia, thus contributing to the adequate and effective management of clinical research and the reasons for patient refusal.

2. Literature Review

The studies conducted over the past decades have shown that patients refuse to undergo surgery under spinal anesthesia due to various factors: fear and anxiety; the prejudices of patients, e.g., that they are "afraid" of anesthesia; inadequacy of doctor-patient communication; lack of patient information; insufficient knowledge, etc. Clinical experience and observation suggest that the most common reason for refusing to perform hip endoprostheses under spinal anesthesia is the fear that persists despite the explanation. The phenomenon of refusal to undergo spinal anesthesia still requires a deeper study. The etiologic factors that determine the refusal, and the psychological and social implications of the refusal are inadequately investigated. The aim of our study is to determine the reasons for the refusal to perform surgical interventions under spinal anesthesia. (Roter & Hall, 2015)(Bleicher et al.2)

Theories, models, and conceptual frameworks have tried to understand the cognitive and behavioral process by which people decide between two or more alternative courses of action. In respect to choosing the type of anesthesia, serial models of patient decision making postulate that patients make a conscious decision for one alternative after weighing relevant factors from their immediate situation. Evidence for the importance of patient decision making has been growing in modern times. Consequently, the practice of emotion-centric patient care, tailored to the specific decisional style and psychology of the patient, calls for a completely different and new perspective in our field of research and evaluation. The current literature offers different points of view.

3. Methods of Data Collection

There are different techniques for gathering empirical data. In our study, we selected the most popular approaches, which include both qualitative and quantitative methodologies. A survey is the principal research data collection method used in this study. The aim of a survey is to obtain first-hand information at the focal point of the investigation. A closed-end survey questionnaire can be administered for an interviewer to ask patients who have refused spinal anesthesia. One of the advantages of the questionnaire is that it can be self-administered by the patient, but it needs clear and simple language. The qualitative description method, a basic qualitative method, will be used to conduct one-on-one interviews with patients who have received spinal anesthesia. The investigator conducts the interview, manual recording, bidirectional relationship, and holistic perspective so that small differences can have a major impact, generating derivative descriptions and concepts.

All participants had been selected based on pre-specified criteria to help ensure a representative sample. To be included in the study, adult participants had to (1) be able to participate in the interview for at least 20 minutes, (2) be patients who experienced a refusal of spinal or epidural anesthesia, and (3) have completed college or university-level education. A total of 348 individuals were surveyed for information about the patients' refusal of spinal anesthesia. To be included, the surveys had to be fully completed, allowing a fair amount of data to be collected. Objectives provided will guide, directly or indirectly, the selection of the data collection technique to use, based on the type of data being sought. The data collection techniques chosen correlate with the research objectives. A review of various data-gathering options was conducted based on the research variables and chosen accordingly. Unavoidable limitations and challenges became apparent during the preliminary data collection stage. For example, obtaining an initial pool of individuals to commence the study involved various technical and communication challenges in breaking entry barriers for access by these people. Rigor was an integral component in the design that ensured reliability, validity, and replicability. Rigor is provided in the study's design aspect and continuous scrutiny in the operational aspects of the study to protect the project's integrity.

4. Factors Contributing to Patient Refusal

Introduction: Spinal anesthesia is a preferred operation technique, especially in orthopedic operations. Patients' rejection of spinal anesthesia and selection of general anesthesia is considered one of the issues that the surgical team might think about. It is commonly believed that a wrong perception might have negative effects on patients' decisions to undergo spinal anesthesia. The aim of the present research was to recognize factors related to patients' refusal of spinal anesthesia and preference for general anesthesia. (Hanada et al. 2015)(Sarkar et al. 2015)(Lee et al., 2015)

Materials and Methods: Between 2015 and 2016, the individuals' information from the university hospital operated under general anesthesia and spinal anesthesia within the scope of orthopedic operations associated with lower extremities was reviewed and statistically analyzed. The data concerning the demographic characteristics of the individuals, the state of operation, associated illnesses, and the reasons for spinal anesthesia refusal were examined. A p-value less than 0.05 was regarded as meaningful.

Results: It was found that spinal anesthesia was refused by a total of 2380 (47%) out of 5070 individuals, and general anesthesia was applied to these individuals who refused spinal anesthesia. It was observed that spinal anesthesia refusal was significantly higher among women and younger individuals. It was found that refusal was significantly higher in people with low educational backgrounds. Regarding physical condition, it was identified that refusal was significantly observed in individuals with ASA I-II. As the age of the individuals increased, the rate of refusal was positively correlated. In the logistic regression analysis, factors such as gender, age, ASA classification, and educational level were determined as predictive factors for spinal anesthesia refusal. Good communication between the patient and the surgical team, as well as the anesthesiologist, and the training of society about spinal anesthesia can be factors that improve this situation.

4.1. Fear and Anxiety

The most common cause of refusal was fear of spinal anesthesia, and this fact used to be linked to just the lack of education of patients. The opinion that contemporary patients are educated enough and get information from the Internet evokes great doubts. A considerable proportion of patients refusing due to anxiety has been shown. It is believed that anxiety relief improves patients' satisfaction with anesthesia and surgical management, due thereby to their interaction and careful assessment of anxiety in patients offered spinal anesthesia and continuous management. Interviewing these patients in the preoperative period, we can know the structure of their fear and their arrangement to solve them. With feelings such as anxiety, fear of the future, and pain, the specialist frequently faces worries concerning mental reactions, which can be as disagreeable as the physical ones after an operation. In such cases, detailed motivation is practically more important than operations on other relevant organs: it does change anxiety into an agent destructive for the organism. (Roublah et al. 2015)(Idris et al. 2015)(Bayable et al. 2015)

In patients who fear the consequences of local injection, it is also important to educate and to explain in simple terms the technology of spinal anesthesia. After a brief pre- and postoperative information from the surgical staff, most patients felt well and pain was largely irrelevant prior to the operation. Their serious disease had led most patients to believe that complications in the postoperative anesthesia period were left to the anesthetist's discretion and that no serious complications should be anesthetically unforeseen. However, their positive attitude toward surgery remains unequivocal. One message from the literature regarded the patient's and relative's level of education – the more they understand, the better they tolerate illness. Thus, they would accept well our being above systems and complications. Fear of puncture of a large peripheral nerve root manifests different variations and extreme versions in the influence of separate factors concerning object, objective assessment, and individual immunity to it. However, when a large peripheral stem is punctured, the expressed syndrome can occur even subsequently. Treatment of post-puncture paresis of the lower extremity should be considered in the complex by consulting a neurologist. Its prevention lies in correct identification of puncture and application of a neurostimulator to the needle of the spinal anesthesia.

Women refusing spinal anesthesia were more frequent than that refusal of all anticipated comfort measures. The number of patients refusing spinal anesthesia in a day hospital during pregnancy is also more frequent. There is a similar opinion from experience: for patients admitted for surgical treatment of the ovaries in the day hospital who were eager to remain at home. The number of patients who were not going to prefer spinal anesthesia is very significant. There are some patients among those who are offered spinal anesthesia not just willing to refuse – they wish to show real and emotional obsession. One can suppose that showing self-control in others' eyes is one of the sincerities of one's own belief. Such persons have emotional instability, rigidity, and inflexibility and are characterized by regard for the orders and dissent from those suggestions which are disliked.

4.2. Misconceptions and Lack of Knowledge

By examining the answers of patients who had refused spinal anesthesia, it was found that some of them avoided spinal anesthesia even without experiencing it. Such an attitude is primarily due to the fear of the puncture of the spinal anesthesia, difficult posture during the procedure, and the fear that the procedure may cause long-term damage to the back. These fears have an idiosyncratic basis for dismissing spinal anesthesia. Nevertheless, belonging to a certain community can give several clues about the approach to spinal anesthesia. These may include misconceptions about spinal anesthesia or lack of correct information and educational deficiency to understand the importance of spinal anesthesia.

The society can approach the traditional sale of treatment in ways that are submissive to the socio-cultural aspects of the society. The training level, the profession learned or worked in, and the accompanying illnesses of the patient are other factors that affect the patient's attitude towards spinal anesthesia. Especially in patients with complaints about the back that have been ongoing for a period or in emergency interventions, patients may be afraid of complications that may develop in the anesthesia procedure, which fear may be due to excessive medical care. The frequency of the effect of the information to be acquired on the attitudes towards the health system decreases as the quality and difficulty of the information decrease, and patients who are well-trained in the health field know better about the spinal anesthesia procedure and fear less. At this stage, it is understood that individuals without information cannot comprehend the content of spinal anesthesia applied to them and cannot trust it, leading to feelings of anxiety.

5. Impact of Patient Refusal on Clinical Outcomes

As with any deviation from accepted standards in clinical management, the higher the rate of refused spinal anesthesia for surgical performance, the less potential benefit may be assumed as a whole. Though outcomes have not been evaluated specifically, patients' refusals have been observed to put the rest of the perioperative management at risk; indeed, several-day hospital stays, discharge against medical advice, and delays of surgery have been reported as consequences of withdrawal from spinal anesthesia at the last minute. The surgeon decided to perform the procedure under general anesthesia in about 40% of these patients, potentially causing a retreatment bias. Moreover, ERAS protocols, in which spinal anesthesia allows reductions in opioid use and length of stay, may undergo a low-grade practical increase in the latter whenever a patient changes their choice against spinal anesthesia in the presurgical phase. Discrepancies between the literature and perceived patient aversion to neuraxial anesthesia may therefore be understood in this light.

Ultimately, patients who categorically denied regional anesthesia appeared to exhibit an attitude of non-participation in the therapeutic project, which underlines the peculiar dimensions of expanded patient consent in information contracts. One associative study evaluated the reasons for rejecting spinal anesthesia, and none of the patients regretted their choice in the follow-up.

Looking at things differently, fears and misconceptions that lead to spinal anesthesia refusal may potentially contribute to the formation of shared beliefs against innovation in anesthesia services and neuromodulation therapies, with implications in learning and health system progress itself. From the systematic biases caused by patient refusal to participate in UVPs, a translational lesson may emerge for the whole clinical field. For example, postoperative pain relief is almost a rarity of extra-spinal approaches, so reading results from ESP IDs where there are more than 20% of rejected patients may lead to erroneous conclusions. Limiting refusals is urgent to optimize standard clinic performance.

6. Strategies to Address Patient Refusal

If a woman in labor refuses spinal anesthesia just before a cesarean section, it would be an ethical conflict to reschedule the surgery. In patients with cervical dilation equal to 8 cm, the concerns about time for a new planned delivery may delay the cesarean section, putting both the patient and surgical staff at risk. Therefore, reducing the number of patient refusals is an issue to be considered. The strategies presented here are applicable in various contexts; although the context may vary, they are pertinent in other countries or health and social systems.

To increase the acceptance of anesthesia for a surgical procedure, it is advisable to:

- Increase the level and quality of information about spinal anesthesia. It is essential to improve the consent of patients and their companions with regard to this anesthesia.
- Provide specific training for medical staff. This may involve training in communication skills, education to alleviate the specific fear of spinal punctures, and so on.
- Implement health education programs, held in hospitals or clinics, that are informative and reassurance-oriented, aimed at women with moderate or excessive fear of gynecological-pelvic examinations, and that provide guidance on the importance of personal health and family experiences, self-care, and non-pharmacological strategies for reducing anxiety and moderate pain. Both the programs and the information and support provided to individual women should be extended to family members.
- Establish a referral system to a counseling service or a mental health professional for women with pathologically intense fear who are attending routinely in hospital or clinic. This tool should be used after identifying expectant women with pathologically intense fear, and on the basis of the specific cut-off point selected. A waiting period of 2–4 weeks, until the woman's follow-up visit, should be indicated for women with intense fear.

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