

Examples of positive suggestions given to patients undergoing orthopaedic surgeries

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Abstract: In the Department of Orthopaedic Surgery in the University of Debrecen, Debrecen, Hungary, we examined the effectiveness of positive suggestions used in the perioperative period in hip and knee arthroplasties performed under spinal anaesthesia. The goal of the suggestions was to reduce the need for red blood cell transfusion and for analgesics, and to increase the patients' satisfaction. The objective of this article is to present our method with concrete examples of positive suggestions which were given first before the surgery (via personal conversation), then during the operation as well (via audiotaped method). We hope that our article will contribute to the wide-spread awareness of this relatively easy to learn communication method.

Keywords: positive suggestion, hip arthroplasty, knee arthroplasty, spinal anaesthesia

Introduction

Literature shows that hospitalized patients in the perioperative period spontaneously shift into a trance state due to the perceived vulnerability and loss of control. For us the most important feature of this altered state of mind is that patients become more sensitive to the positive and negative suggestions without any formal induction. In this state patients can be characterized by the so-called "primary process" thinking – which typically describes the unconscious mind. Patients in the trance state follow the received suggestions without consideration, conceiving the dialogues word by word and interpret them in the worst way from their point of view. Therefore, it is very important to avoid negative suggestions and to take the opportunity of providing positive suggestions to patients in the trance state [1–3].

Jakubovits et al. played a favourable text to 51 patients before and after surgery and they examined the effects of these suggestions on the patients' state. They found that patients in the suggestion group had better mood, they were less distressed and they had less pain as compared to the control group [2].

Szilágyi et al. [4] conducted a prospective, randomized, controlled study among patients who were me-

chanically ventilated for more than 48 hours, examining the effects of the applied positive suggestions following the method of Varga et al. [3]. Sixty patients were enrolled in the study (33 patients in the suggestion group, 27 patients in the control group). The results were significant ($p < 0.004$): patients in the suggestion group required a 2.5-day shorter ventilation period, and the days spent in the intensive care unit also decreased by 4 days compared to the control group.

Enqvist et al. gave positive suggestions using audiotape to 60 patients during maxillofacial surgeries. They found that the positive suggestions decreased the blood loss ($p = 0.008$), the systolic blood pressure ($p = 0.032$) and the days of hospitalization ($p = 0.025$) [5].

In another study, involving 48 women with breast cancer, the same authors experienced that patients receiving suggestions required significantly less analgesics ($p < 0.02$) [6].

Hart et al. could decrease the transfusion rate in heart surgeries giving positive suggestions to 40 patients via audiotaped method ($p < 0.05$) [7].

Rapkin et al. [8] examined the amount of blood loss and the need for transfusions in head and neck tumour surgeries, while Ross [9] in removal of third molars. In their studies they concluded that the amount of blood

loss could be diminished by suggestions. They also proved that hypnotisability showed a positive correlation with the decrease in blood loss [8, 9].

Several other studies confirmed that positive suggestions decreased the frequency of postoperative vomiting, the length of hospitalization and that after abdominal surgeries the bowel movement returned earlier [10–14].

Aims of the Study

Today, with the increase of the average age, arthroplasties due to hip and knee degeneration become more frequent. Arthroplastic surgeries are long and stressful procedures to the patient. Most of these operations are performed under spinal anaesthesia, during which the patient might be awake and thus can hear the sometimes alarming noises of the intervention, like drilling, sawing and hammering. During the surgery – due to the considerable amount of blood loss – giving red blood cell transfusion might become necessary. In the postoperative period, patients require various amounts of analgesics on a daily basis.

In April 2011, we launched a clinical investigation in our department to verify that positive suggestions applied partly before and partly during the surgery can decrease the demand for red blood cell transfusions, for analgesics, and for tranquillizers, can enhance the healing of the wound, and increase the patients' satisfaction. Patients undergoing hip or knee arthroplasties under spinal anaesthesia were enrolled into the study.

Although the number of the published controlled studies about the effectiveness of suggestions increases, most of the papers do not report the suggestive protocol applied in the study. In this paper we would like to make the suggestive techniques applied in our study available, exemplified by verbatim quotations.

Materials and Methods

A randomized prospective clinical study is being performed, in which we enrol patients undergoing total hip or knee arthroplasty under spinal anaesthesia. The study is still in progress. It is being conducted in the Department of Orthopaedic Surgery at the University of Debrecen, Debrecen, Hungary, with the authorization of the Institutional Review Board. Before enrolment all patients gave their written informed consents.

Patients were randomized in a 1:1 ratio to two treatment groups, using stratified block design (with a block size of 4), via tossing a coin. Patients in the control group received care as usual, i.e. they received information from their surgeon and their anaesthesiologist. In addition to that, those who were in the suggestion group also participated in a 1-to-1 verbal discussion

with an orthopaedic surgeon before the operation. This doctor (CS) was the same for all patients, and was not the therapist to any of them. During this discussion she applied positive suggestions. Later, during the surgery, patients in the suggestion group listened to audiotaped suggestions where repeated suggestive texts were connected by relaxing music.

During the study we collected the following data: required number of red blood cell transfusion; haemoglobin and haematocrit levels before the surgery, on the day of the surgery, and on the second and sixth postoperative day; amount of analgesics and tranquillizers received; the value of an ordinal scale (depicting smiles) filled by the patient to assess his/her subjective mood.

Applied Suggestions

The suggestive methods demonstrated below were constructed based on the studies of Varga et al. [1–3] and Bejenke [15, 16]. The sentences and techniques were modified according to the types of surgeries and to the hospital circumstances.

Structure and theme of the preoperative discussion

The preoperative discussions were conducted on the day before the surgery in a separate room, i.e. in privacy with the patient. These discussions lasted for about 20–40 minutes. This session was a “semi-standardised” procedure, where the discussion was tailored to the actual questions and possible concerns of the patients, but followed a previously set protocol. That way each patient in the suggestion group received all key suggestions, either as a response to their question(s) or without that.

Visiting the patient in their ward, our initial strategy is the “yes-set” to get positive answers latter:

Doctor: – Am I right that you will be operated by doctor XY?

Patient: – Yes.

Doctor: – Are you going to have hip (or knee) arthroplasty tomorrow?

Patient: – Yes.

Doctor: – Has doctor XY already visited you today?

Patient: – Yes.

After applying the “yes-set”, we can effectively give a considerable suggestion to the patient, like: *Then, you are ready to renew and to have a well functioning leg.*

Thereafter we invite the patient to ask those questions which still concern him/her the most. Via this act, we assess his/her mental state and ideas, which helps us to use the pacing-leading method. For example in case the patient is afraid of spinal anaesthesia, the following answer is given: *You know, many people tell us before the*

operation that they have similar fears as you have. (This was the pacing period, which is followed by the leading.) *Still, we have the experience that spinal anaesthesia is much more pleasant for the patient than general anaesthesia and it is more comfortable than how you might imagine it right now...* (The applied phrase does not enforce the patient to have the same feelings, but a possible positive attitude is offered.) *Many patients tell us after the operation how interesting experience it was to observe that they cannot move their toes and thereafter to watch how the normal function returns into the whole body.* (Positive samples are shown.)

We ask about the patient's previous surgical experiences. In case he/she had no operation before, we answer the following: *Very good. This means that your body is very healthy. In this case everything that will here happen to you will be an interesting and new experience for you.* If the patient had positive experiences with the previous interventions: *It is very good that you had such positive and comforting experiences. In this case you can go through this operation calmly and comfortably...* In case of negative experiences: *Why would it not happen differently this time...? You know, one bowl of soup succeeds well, the other does not.*

After that, we explain the main points of the surgery (adapted to the patient's need), while incorporating suggestions which aid recovery: *those parts of the bone which are worn off and cause pain to you will be taken out; the implanted materials are recognized by your body almost as your own and your body fully accepts them; after the surgery your only task is to let your body do its work and heal fast and properly.*

We prepare the patient that he/she might hear the noises of the operation. Here we use the technique of reframing: *When you hear the sounds of the surgery, think of it as if it were the noises of a house renovation and imagine that this renovation is the renovation of your hip/knee and when it will be ready you can happily use it again.*

We also give suggestions to decrease blood loss: *It is normal that during the surgery you will lose some blood. But it is very good that your body can adapt to the circumstances and it knows by itself how to withdraw the blood from the surgical field to other parts of the body to decrease the amount of bleeding. The way you can digest or breath, your body also knows what to do to allow only the minimal necessary blood to flow to the surgical field.* (We reassure the patient that he/she does not have to do anything in order to decrease the blood loss, the body will do its job on behalf of the patient.)

To reframe the postoperative pain, the followings are said: *...the pressure that you will feel under the bandage will be a huge relief, since it shows that the healing already started. You might feel some prickling and tensile sensations: this tranquilizes you as these mean that the tissues perfectly adhere to each other and they heal rapidly.*

To aid the postoperative mobilization, we use a metaphor: *The first steps might be a bit strange. It will be a bit similar to when you learned how to walk in your childhood, step by step, gradually. The only huge different will be now that you already know how to walk and you only have to adjust your steps to the new circumstances.*

Positive suggestions applied during the operation

The applied intraoperative suggestions confirm the preoperative ones – as required by one of the principles of suggestion methods, the repetition. Some examples are shown here:

You are resting comfortably. You are safe. You feel peaceful. This is an important operation. Your body and soul works together with the doctors. (The goal is to reach a relaxed state where the patient feels safe.)

Your body withdraws the redundant blood from the surgical field. Only as much blood flows there as much is required to supply the tissues with sufficient nutrition and oxygen... There is no need for bleeding or inflammation... (We reaffirm the previous suggestions to decrease blood loss.)

The sounds that remind you of a construction will help you to heal, to move easier, and to reach a better life quality. They suggest that soon you can use your new joint. (The surgical noises are reframed in the same manner as in the preoperative discussion.)

You recover easily and quickly after the operation. All the infusions, catheters and drains in the first days will serve your perfect healing. Their presence is relieving. (We give suggestions for the postoperative recovery and prepare the patient for the difficulties in the intensive care unit.)

Even if you feel pressure at the site of the operation, it just simply means that the healing has already started. It suggests that you have to relax and find the most comfortable position... The tensile, prickling sensation under the bandage calms you, since it means that the tissues adhere to each other perfectly without swelling or leakage. (These are new possibilities of reframing the pain.)

Day by day you are feeling better and better, stronger and stronger, healthier and healthier. You are confident, forbearing and cheerful. Your recovery is fast and perfect. (We assure the patient about the fast and easy recovery.)

Discussion

Western medicine and medical education mainly emphasise the somatic treatment methods. Although in the last years there has been a lot of improvement in the education of patient–doctor communication in the Hungarian medical universities, it still seems to require research, time, energy, and ongoing education. The physicians should consciously build the possible communication techniques into the discussions with patients.

Many randomized clinical studies confirmed that the patient–doctor communication significantly influences the patient’s recovery [17, 18]. Besides these facts, it is also known that during hospitalization the patients have such a deep stress and loss of autonomy, that it leads to a more sensitive mental state, in which the patients are more responsive to the external stimuli and to the contents of the heard sentences. This gives the possibility to the physician to take the advantage of the altered state of mind and to aid the patients’ recovery by using positive suggestions in their communication [19].

Previous studies suggest that positive suggestions applied in the perioperative period of surgeries in general anaesthesia can diminish the length of hospitalization, the need of medical drugs, the amount of blood loss, the rate of complications, the length of ventilation period and it can aid the healing of burned patients [3–6, 20–22].

In the Department of Orthopaedic Surgery of the University of Debrecen, Debrecen, Hungary, we started a randomized, prospective clinical study to investigate the effectiveness of positive suggestions applied in hip and knee arthroplasties under spinal anaesthesia. In the present article we demonstrated the applied suggestive techniques which are aimed to effectively influence the healing, the general condition of the patients, and the required transfusion rate.

We hope that the application of positive suggestions will be soon part of the daily routine, because after learning the appropriate communication techniques, the use of them does not cost anything and it does not require any extra time. Meanwhile, these positive suggestions may improve the recovery of the patients and may decrease the costs of the surgeries (via reducing the transfusion rate and the medication consumption and via the less frequent complications).

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Conflict of Interest

None of the authors’ professional and financial affiliations could bias the presentation.

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