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## SUGGESTIVE COMMUNICATION WITH THE VENTILATED PATIENT

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Mechanical ventilation (MV) is a life saving method usually applied in the Intensive Care Units (ICU) for patients in a critical condition. Today it is more and more obvious that patients treated in the ICU require not only intensive physical (medical) care, but also intensive psychological support in order to avoid severe stress and to cope with the situation. They need help to understand the aim and helpfulness of the treatment, and information about the peculiar or frightening aspects of the situation, in order to promote positive processing. In this paper we summarise an approach, called psychological support based on positive suggestions (PSBPS), where patients on MV were supported with suggestions based on the principles of hypnotic communication. We present the foci of the phases of (1) initiation, (2) maintenance and (3) weaning off from MV from a psychological point of view, along with some verbatim suggestions we used with patients during these three completely different phases of MV. The main results of a randomised prospective study testing the effectiveness of PSBPS are presented briefly.

**Keywords:** suggestion, communication, intensive care, mechanical ventilation, altered state of consciousness, positivity, informing patients

**Suggestive Kommunikation mit beatmeten Patienten:** Beatmung ist eine lebensrettende Maßnahme, die auf der Intensivstation bei Patienten im kritischen Zustand immer häufiger angewandt wird. Man ist sich heute im Klaren darüber, dass die Patienten auf der Intensivstation nicht nur eine intensive physische (medizinische) Behandlung brauchen, sondern auch eine wirksame psychologische Unterstützung benötigen, die ihnen dabei hilft, die Stressoren besser zu ertragen und erfolgreicher zu bekämpfen. Die Patienten brauchen Hilfe, um das Ziel der Behandlung zu verstehen, und Informationen über die sonst beängstigend wirkende Situation.

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Hiermit unterstützen wir eine förderliche Einstellung des Patienten. In vorliegender Studie beschreiben wir die „auf positiver Suggestion basierende psychologische Unterstützung“, in deren Rahmen die beatmeten Patienten eine auf den Prinzipien der hypnotischen Kommunikation basierende Unterstützung erhalten. Wir stellen das Wesentliche an dieser Herangehensweise (1) bei Beginn der Beatmung, (2) während der Beatmung und (3) bei Beendigung der Beatmung dar und heben dabei besonders die unterschiedlichen psychologischen Projektionen der einzelnen Phasen sowie den Wortlaut der Suggestionen, die in den einzelnen Phasen verwendet werden, hervor. Schließlich referieren wir kurz die Daten einer randomisierten prospektiven Forschungsarbeit, in deren Rahmen wir diese Herangehensweise bei beatmeten Patienten durchgeführt haben.

**Schlüsselbegriffe:** Suggestion, Kommunikation, Intensivtherapie, maschinelle Beatmung, veränderter Bewusstseinszustand, Positivität, Patienteninformation

## 1. Introduction

Mechanical ventilation (MV) is a life saving method usually applied in the Intensive Care Units (ICU) for patients in a critical condition. Its medical value has been well studied for decades, however its psychological impact has been investigated much less.

During the past 50 years progressive development of the technology of life support and monitoring in the ICU has led the caregivers to underestimate the importance of human contact, and gradually ignore active communication with the patient, relying almost entirely on the numerical values produced by machines and monitors for treatment.

MV patients are usually sedated, and even when awake they are unable to speak, because of the tube in their throat. The patient might soon become a kind of additional (sometimes rather annoying) parameter beside the really important data: the blood test results, flow and pressure curves, blood gas and haemodynamic values, etc.

Being a patient in the ICU is an extremely stressful situation. The environment itself is entirely different from the usual hospital ward (BERGBOM-ENGBERG & HALJAMAE 1989; HALL-LORD et al. 1998; PENNOCK et al. 1994; ROTONDI et al. 2002; RUSSELL 1999; VAN DE LEUR et al. 2004). There is almost constant noise (HANSELL 1984; SLONIM 1974; TOPF 2000), the sleep-rhythm is disturbed (CRINER & ISAAC 1994; KORNFELD 1969; SIMINI 1999), the privacy of the person and even the mere integrity of the body itself is often violated, physical and emotional pain is very common (KRESS et al. 2002, 2003; PUNTILLO 1990, 2003; SIMINI 1999). Apart from the disabilities due to the original disease itself, the patient suffers the restrictions brought about by the ICU care and interventions: e.g. inability to speak, impossibility of enjoying privacy and intimacy (BERGBOM-ENGBERG & HALJAMAE 1989; ROTONDI et al. 2002; RUSSELL 1999; VAN DE LEUR et al. 2004).

These circumstances usually lead to a negative trance state, thus fulfilling the criteria of 'critically ill' patients (CHEEK 1958, 1969). The patient can be considered to

be highly open to suggestions, and already hypnotised, even without any formal hypnotic induction (see e.g. CHEEK 1969; BEJENKE 1996a, 1996b).

During usual ICU treatment this increased suggestibility frequently meets (unintended) negative suggestions coming from the environment. It is no great surprise that people leaving the ICU report extreme traumatic experiences, often reaching the level of Post Traumatic Stress Disorder (PTSD), where the 'trauma' is (was) the intensive treatment itself.

## **2. Traumatic experiences during ICU stay**

The majority of the patients following MV remember the psychological and/or physical stressors during intensive care, and find them moderately or extremely disturbing. In these reports the most frequently mentioned stressors are (values in brackets show the % of patients reporting the given stressor):

loneliness (73.7%), pain (56%), noise (51%), fear (44%), anxiety (59%), sleep deprivation (35%), feeling tense (46%), inability to speak (65%), lack of control (46%), thirst, difficulty in swallowing (44%), spells of terror (32%), nightmares (17%) (see ROTONDI et al. 2002).

We claim that there is a real-life patient present during the whole ICU treatment perceiving the events around him/her, processing the information/impressions and often suffering long-term effects because of the negative impacts. It is therefore becoming more and more obvious for all intensive care specialists today that patients treated in the ICU require not only intensive physical (medical) care, but also intensive psychological support in order to avoid severe post traumatic stress syndrome jeopardising long term Quality of Life (QoL) (SCHELLING et al. 1998). We need to help the patients to understand the aim and helpfulness of the treatment, and give them information about the peculiar or frightening aspects of the situation, in order to promote positive processing. Today there is no doubt that this need exists, but how to satisfy this need is not yet commonly agreed. As critically ill patients are highly susceptible to suggestions, they are especially eligible to be supported by suggestive communication and/or formal hypnosis (DIÓSZEGHY & VARGA 2002; VARGA & DIÓSZEGHY 2003; VARGA 2004).

In this paper we summarise an approach where patients on MV were supported with suggestions based on the principles of hypnotic communication (HAMMOND 1990; WEITZENHOFFER 1989).

## **3. Psychological support based on positive suggestions (PSBPS)**

During MV, instead of the usual physiological way of breathing, a machine pumps air into the lungs with positive pressure through a plastic tube inserted into the patient's windpipe (trachea) (as opposed to the normal way of inhaling air due to the partial vacuum created by the increase of the chest volume). The mechanical ventilation is

far more common than one would expect: it is the gold standard intervention for patients in respiratory failure and used for about 314/100,000 of the population in the United States, with a continuous increase in all age groups (CARSON et al. 2006).

Considering that the lung and chest wall are extremely sensitive to pressure changes, and that the pattern of pressure changes is just the opposite during mechanical ventilation than during spontaneous breathing, it is not surprising that the experience of MV is strange, frightening or at least uncomfortable. In these circumstances patients unconsciously start to hold their breath or they try to exhale during an inspiration phase, thus causing dangerously high airway pressures. This scenario is often called 'fighting against the ventilator' and doctors tend to overcome it with sedative and muscle relaxant medication. Nevertheless one can get used to the experience of being mechanically ventilated (or it can be learned); coping with the ventilator then is usually possible. However, this active coping is rarely achieved because when patients start to 'fight', the sedatives and relaxants prevent them actively learning this new way of breathing. (It would be strange to sedate the candidates in the scuba diving school rather than sending them to the deep when awake.) Furthermore, the lack of this learning process and of the ability to cope helps to develop an unproductive passivity and learned helplessness during and after the phase of weaning off.

Moreover, excessive use of pharmacological sedation can cause side effects like unpredicted drug interactions, or the concealing of subtle symptoms; long lasting effects like addiction or neuromuscular weakness can also develop. When reducing the dose of pharmacological sedation, however, the need for a non-pharmacological approach emerges. PSBPS is likely to meet this need by using none of the pharmacological agents but helping the patients to cope with the MV. PSBPS – unlike any of the sedative drugs – is able to support the patients' need for developing more active co-operation with the caregivers and building up coping mechanisms against PTSD.

So far we have not found any examples in the literature of using PSBPS during MV. However, it is reportedly being used by several practitioners in different patient groups, mainly to achieve the same goals. In our view, based on our experience, all the tiny aspects of this communication should be carefully formulated because of the extreme and critical nature of the situation.

#### **4. Psychological aspects of MV**

The foci of suggestions we used with patients during the phases of (1) initiation, (2) maintenance and (3) weaning off from MV are described below.

From a psychological point of view, the above three phases are completely different:

(1) At the *beginning of MV* the patient should immediately adapt to a way of breathing that is completely different from the physiological way. The patient should co-operate not only with the staff, but with the machine as well. Meanwhile, in the majority of the cases, the patients are in acute panic because of the illness, feeling asphyxia, extreme fear and uncertainty.

- Important points, recommended suggestions:

It is an absolute priority to *inform the patient* about the nature of MV: explaining the reason for the treatment, its aim and the way it is achieved. If possible, all this should be done before the actual treatment is performed. For example in the following way:

*'To feel better your body needs some help. We will provide this by inserting a thin plastic tube into your mouth. This tube is connected to a machine that detects exactly when your lungs need fresh air so it can be delivered promptly and efficiently.'*

It is important to emphasise that this treatment is needed only temporarily and will last only as long as the lungs need this extra support. Weaning off is a process which starts at the beginning of the initiation of MV. This message can be delivered in different ways, like:

*'The machine will help you until your body is strong enough to breathe again on its own.'*

It is crucial to make the patient understand that due to the tube he/she will be unable to speak, but when the tube is removed speech will come back.

To reframe the unusual, non-physiological way of breathing we can say:

*'Obviously, breathing with the help of the machine is different from the usual way. Soon you will be accustomed to the machine, as you will experience more and more this rhythm and depth of breath.'*

(2) *Maintaining MV* means: to set and keep a balance of adequate oxygenation and a non-physiological process of ventilation. To do this, the patient must rely on the machine, not work against it.

All of the interventions during MV (suctioning tracheal mucus, repositioning the tube, nebulisation, etc.) can be done much more smoothly, and with much less traumatising effects by first explaining them, using positive suggestive principles.

- Important points, recommended suggestions:

By stressing, from the beginning, that the *hospital is a safe place* and by explaining, and being reassuring about the treatment we can make the stay in ICU more comfortable for the patient:

*'The most important thing has already happened: you are in a ward where everything is available for you to get the best treatment. In your case this means basically: (here we should state positively the aim of the treatment)<sup>1</sup>. Doctors, nurses and all these fantastic machines around you are just to help your body to regain the balance for its harmonious functioning.'*

The machines can be reframed as the sources of security (instead of sources of awesome noise):

*'The machines around you continuously monitor the needs of your body. The beeps are signals for us, just serving your safety. As you see, there is always someone observing the machines, and doing what is needed when it is needed.'*

<sup>1</sup> Notice: the suggestion only 'implies' the positive outcome, does not promise anything directly.

*And since you are safe, and the nurses and doctors are taking care of you, you can feel safe and relaxed, and leave the machines and the nurses and doctors to keep a close watch over you. Consider this, and you will find these sounds much more reassuring. Some imagine that these noises are that of a pleasant boat-ride, a cruise, this way their attention can be focused on the comfortable aspects of this trip . . . these sounds serving as background noises to this pleasant scene.'*

To enhance patient-machine attunement:

*'This wonderful machine can help you in many different ways . . . We have plenty of settings to adjust . . . just like a very good bike, where you can adjust the seat or handlebars, to make it more comfortable . . . Here, as well, we can set those values together to find which way is most comfortable for you . . .'*

The discomfort of endotracheal suctioning can be considerably reduced by appropriate explanation (preferably before performing it):

*'While the machine is helping you in breathing, it is usually difficult to cough up all that mucus normally produced in the lungs. You know, the usual way of cleaning the lungs is that we cough a bit (demonstrate), and that is it. While you are ventilated, we need to clean your lung from the outside.'*

*'This will be done by inserting a thin soft tube through that bigger tube that is already in your throat. You will feel it only when it is deep down, deep enough to reach the place it will clear up. Please indicate by a small cough when it is down there! (reframing the reflexive coughing). With the help of this, you can transfer the phlegm from the more distant parts of your lung to the end of the tube so we can remove it easily.'*

Before the first suctioning it is especially important to explain that the whole procedure is very short, *'No longer than a big, deep breath . . .'* and we can focus the patient's attention on the immediate good feelings of the clear breathing following the procedure.

It is crucial to *encourage the patient to communicate* with the caregivers, even though he/she cannot speak, and to express his/her wishes, questions, requests. With care we can find the way each patient can give his/her message: by writing, blinking, nodding, gestures, pointing to a table of printed letters, etc.

It is important to *focus the patient's attention to the signs of gradual recovery*: we can show and discuss the signs and/or ask about those slight changes that he/she can feel. This is important, as the weaning off from the machine should be based on a good level of strength and recovery, realised and accepted subjectively by the patient as well.

The patient is recommended to direct his/her attention to the pleasant feelings or experiences (instead of the painful, uncomfortable ones). We can – for instance – simply ask: *'What was the most comfortable moment of this morning? Where do you have the nicest feeling in your body right now? Which part of your body feels the best right now?'* (even in the most uncomfortable situation there must be a 'best' place/area).

With the help of analogies and metaphors we can activate a *positive, helpful meaning* for the whole situation. Whenever possible, we should build this on the experiences of the patient. For instance, in case of a mason patient we explained the long treatment by saying:

*'You are the one who knows how important the foundations are. Here we should not be in a hurry . . . or skip something that is necessary. After that the walls are growing almost by themselves, and the fine work will come: rendering, paint-work, doors and windows, and everything else . . .'*

Or: with a patient who has already been on a ventilator for a long time (and whose hobby was fishing):

*'It is something like fishing . . . You are on the waterfront, patiently holding the fishing rod. Sometimes this is tiring, but those who are insistent, sooner or later catch a nice fish, and are very happy and proud of themselves.'*

(3.1.) *Finishing* ventilation means that the patient should be weaned off the machine, and return to normal, regular breathing. This step is not easy, basically because breathing independently again is much more difficult at the beginning than the patient would expect. By explaining the reasons for this difficulty (e.g. weakened breathing muscles) we can help the patient to cope with this phase.

– Important points, recommended suggestions:

It is crucial to give an *explanation beforehand* about the weaning off method: *'During the previous days your body has gained so much strength, that there is no more need for the help of the machine. We can remove the tube, and you can begin independent / autonomous breathing. You will see how interesting<sup>2</sup> it will be to use again your own muscles to take in the fresh air, and let out the used one. You will be able to get rid of all that phlegm from your lung. You will feel exactly when<sup>3</sup> you need to help your body with a good wet cough to clean the lungs.*

*It may well be that at the beginning this will be challenging, as you have not used your muscles for a long time, but you will see how quickly they strengthen again, now, when they have something to do.*

*By this process you clear up your lungs nicely and gradually, and the wind-pipe becomes cleaner and cleaner, efficiently transporting the fresh air in and the used one out . . . this way your whole body will be fresher and fresher, re-gaining even more strength . . . As the machine is detached from you, you can talk with us and with your relatives.'*

The inhalation-nebulisation therapy – which is usually not really welcomed by the patients – can be explained and reframed like this:

<sup>2</sup> The word 'interesting' can be applied to reframe any (probably) uncomfortable procedure or situation, as it is a neutral or almost positive word.

<sup>3</sup> The expression '*You will feel exactly when . . .'*' is another way to reframe the probably uncomfortable experiences in advance. In this suggestion, by emphasising the control and active cooperation of the patient, we can give positive meaning to any sign – here the coughing. We use these signs to enhance recovery.

*'With this machine we breathe some fine vapor into your windpipe. There is some medication in it that helps the dense, hard-to-cough-up phlegm to loosen. This way it will be much easier to cough it up and get rid of it.'*

By offering choices, the patient can have the experience of being in control:

*'How would you prefer to get the fresh air? Through a nose tube or by the help of a mask? Whatever you cough up can be spit out or swallowed, as you prefer . . . both ways are perfectly safe.'*

We can invite the patient to *actively participate* in the treatment. For example we can ask him/her to carefully observe when the spontaneous breathing is getting *easier* (focusing on the recovery, the good aspects rather than on the difficulties or the restrictions): *While lying or while sitting? In the morning or in the afternoon?*, etc. It is important to focus the attention on the improvement of his/her state.

By regularly evaluating the changes and improvements, we can set *realistic aims* together (e.g. *today: getting up, tomorrow: walking to the door, etc.*).

(3.2.) *Difficult weaning off, re-intubation.* Approximately 15% of long term MV patients require re-intubation within the first 48–72 hrs of weaning off because of various reasons (GIL et al. 2003). When re-intubation is needed, reframe it as a usual (almost natural) step, not as a failure:

*'This is exactly why we are here . . . the machines are always available when needed . . . We can enjoy their help, until your breathing is strong and good enough, reassuringly, both for you and for us . . . meanwhile we can use the help of the machines . . .'*

We can ask the patient to find the inner need: what he/she feels really important for spontaneous breathing?

The feelings of heavy breathing and shortness of breath can be reframed (especially when the somatic parameters are showing that the breathing is sufficient):

*'When you feel this, it's a message from your body saying: this is the time to take a nice, deep breath. By these signs your body expresses that a slow, deep, relaxing breath is needed.'*

The feeling of tiredness can be connected to earlier episodes of positive, comfortable tiredness:

*'This is a good type of tiredness, like what you felt after some good exercise (excursion, etc.); it means that your muscles are becoming strong.'*

In long diseases, when the recovery is prolonged (e.g. Guillain-Barré syndrome, Myasthenia, etc.), it is important to support the patient and overcome the pessimistic episodes. Meeting a patient recovered from the same illness can be very reassuring. It can boost motivation and give optimistic orientation for the future.

## 5. Empirical work and discussion

In a randomised prospective study we tested the effect of the approach described above.

The patients in the study group receiving PSBPS as an adjunct to their somatic treatment ( $N = 33$ ) showed a tendency to need shorter ventilation, a shorter hospital



stay, and to have a better survival rate compared to the control group ( $N = 27$ ) receiving standard ICU care. When we considered the diversity of persons delivering suggestions (that is the stability of the relationship), the following advantages became significant: patients who had contact with the same psychologist for at least 50% of treatment days recovered better than those who were contacted by many different psychologists (for the details of the study and the results see K. SZILÁGYI et al. (2007).

We have found no examples in the literature of applying PSBPS with MV patients. Perhaps the reason for this is the traditional approach: caregivers think that in these extreme somatic conditions there is no place for this kind of 'luxurious' service. However, our opinion is different. We concluded that great care is needed when communicating in these critical situations; all aspects of the communication – even the small ones – should be carefully formulated.

The individualised way of giving positive suggestions to patients can be applied by all the ICU staff as an adjunct to the intensive treatment: by doctors, nurses, physiotherapists, psychologists, and so on. This simple communicational device can be fitted smoothly into the usual life of the busy ICU. The communicational principles can easily be learned by the entire (medical and nursing) staff. After a brief training the positive suggestive features of normal communication could be utilised to form part of the routine psychological support of patients on MV. There is no need for any special ritual, formal induction technique (like in the case of formal hypnosis sessions). Instead, the usual communication can be tailored following suggestive principles.

The suggestions recommended above, however, should not be applied mechanically: the special requirement of each and every patient and the personal style of the caregiver determine the best way of communication in each case (see e.g. KESSLER & DANE 1996). There are a few data in the literature suggesting that this approach can also be applied for unconscious patients. It is believed that getting reassuring information about their condition, and treatment in the form of positive suggestions, is especially important and possibly beneficial to people who are unable to communicate with the outside world.

Our experience with several cases (DIÓSZEGHY & VARGA 2002; VARGA & DIÓSZEGHY 2003; VARGA 2004) and our research data indicate that this way of communicating is a useful adjunct for supporting ICU patients. It improves their cooperation, helps to avoid complications, shortens ICU stay and improves the overall long term outcome, and what's more it is simple and costs hardly anything!

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