

Quality in anaesthesia: Causes Of Customer Dissatisfaction After Subarachnoid Anaesthesia In Elderly Patients

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Abstract

The first step towards quality improvement is the evaluation of quality previous to the implementation of a programme. The goal of this study is to seek causes underlying dissatisfaction of elderly patients who underwent endoscopic urological surgery under subarachnoid anaesthesia.

During the preoperative visit, techniques and effects of subdural anaesthesia were showed to patients; they were interviewed 48 hours after the operation, focusing on causes of dissatisfaction.

The first cause was a postoperative state of agitation, followed by intraoperative psychomotor agitation, fear of lumbar puncture and other causes unrelated to anaesthesiological technique performed.

Results of data showed how preoperative anaesthesiological information is crucial and has to be carefully provided, especially with elderly patients; if needed, a relative can be involved in order to avoid postoperative state of agitation. Important also to re-examine anaesthetic premedication, or combining it with an intraoperative sedation that can reduce patients' sensitivity without altering their consciousness.

INTRODUCTION

Assessing quality is a key factor in the process of transformation taking place within the Italian health system, which is characterised by a steady growth of costs lacking in self-regulation, and by a difficulty in measuring the direct impact of expenses incurred on actual improvements in health population. Moreover, new organisational models employed in other fields, EEC's pursuit of a quality-based policy, and the development of new technologies and methods getting better and better have led to consider quality as a response to the sanitary issue.

Minimisation of errors, an high importance of human factor and a need of guaranteeing the best performance at the lowest cost determine the adoption of quality-oriented strategies.

Besides, quality is an important competitive advantage. In fact, customers can choose the structure they prefer; since they don't pay directly for the service, or they contribute to expenses to the same extent in any structure, they will select the one which offers the highest level of quality.

It is important not to underestimate customers' function:

their assessment of a service is determined by either objective or subjective factors, that is to say, either what they actually receive or what their expectations were. This is why it is even more difficult to evaluate services provided and to standardise operations: thus, customers' contribution to improvement of services becomes a crucial factor.

Considering quality in relation to customers, the conditions that services have to meet are a function of clients' expectations and their needs. Therefore, quality is viewed as "the degree and direction of discrepancy between customers' expectations and perceptions" (Zeithmal, 1991); this is exactly the difference between customers' expectations towards a service and provider's responsiveness to them.

Moreover, during the last few years, the legislator made doctors increasingly liable from a legal, economic and organisational point of view. This became necessary as a way of guaranteeing high quality services to customers, at a time when public health care is under daily attack.

Every improvement of quality adopted by health care systems stems from a previous experience in non-health care companies. Deming and Juran are considered to be pioneers

of this “organisational philosophy”, which puts forward an interplay between management and quality improvement. They played a proactive role in the Japanese industrial rebuilding after the II World War, achieving remarkable results.

Implementing this philosophy to health care systems is possible only if they are viewed as “microcosms” divided into structure, process and outcome: obviously, quality of structure and process has a direct bearing on quality of result. (1)

Since the first step towards quality improvement cannot disregard quality previous to the implementation of a programme, this experience aimed at assessing quality of a service provided by our Operative Unit: the treatment of a population segment, namely elderly patients undergoing endoscopic urological surgery under subarachnoid anaesthesia.

Since diagnostic methods were honed, safe monitoring of main physiological functions spread, improvements in the fields of nourishment, pharmacology and public health care were achieved, the number of patients and the extent of surgical intervention have considerably widened. Nowadays, surgical treatments are often advised even to elderly patients – aged 80 upwards – suffering from severe pathologies, and showing a precarious clinical condition. As far as anaesthetic treatment of such patients is concerned, locoregional techniques are frequently advised, in order to lower as much as possible the clinical impact on vital functions, as well as avoiding alteration of patients' state of consciousness.

Notwithstanding this unquestionable benefit to a surgical outcome, occasional cases of customer dissatisfaction are numbered among patients surveyed. Our research seeks for underlying causes by interviewing patients after 48 hours from the operation, and aims at developing a corrective action based on findings discovered. Thus, high quality services can be provided.

MATERIALS AND METHODS

All the patients under study (18% women and 82% men – average age 74.35) underwent endoscopic urological surgery and stayed in hospital for a maximum of 5 days. They had all been subject to preoperative anaesthetic evaluation about 15-20 days before the scheduled operation: everybody showed a normal cognitive state and no one needed further examination or consultation for hypothetical sensory

deficiency. Moreover, in this context, techniques of implementation and effects on sensory and motor function of subarachnoid anaesthesia were explained; these were collectively understood and signed at the moment of an informed consent.

Patients entering the operating block were treated with 5 mg of Midazolam and 0,5 mg IM of Atropine, as anaesthetic premedication. After 30 minutes they were brought into the operating theatre, where, peripheral venous access being found, subdural anaesthesia in seated position was performed, injecting always hyperbaric Marcaine 10 mg/mL – with a dose ranging from 15 to 20 mg, according to estimated duration of operation and to patients' anthropometric and clinical parameters. Intraoperatively, NIBP, ECG and Sp O₂ were constantly monitored, while postoperatively, NIBP, pain intensity (using VAS), state of consciousness and diuresis were tested every 6 hours for the first two days.

At the end of surgical intervention, all the patients were transferred from the operating block to ordinary admission or to subintensive care unit; then, they were discharged at the scheduled time, without a prolongation of admission caused by complications occurring intra- or postoperatively. After 48 hours from the end of operation, patients were asked by the anaesthetist to assess the clinical service received, focusing on what caused their satisfaction or dissatisfaction. Then, the doctor filled in a prescribed form recording those information including patients' personal data and their surgical intervention's duration and typology.

RESULTS

The average age of patients examined (18% females, 82% males) was 74.35; A.S.A. classes represented were class II (52%), III (38%) and IV (10%); every surgical procedure analysed belonged to the field of endoscopic urological surgery (TURP 36%, TURV 34%, TUIP 21%, TURP+ELT 9%). The most frequent reason for customer dissatisfaction was a postoperative state of agitation (25%): despite previous information got during the preoperative anaesthetic evaluation, elderly patients perceived, in astonishment, a sensory loss and a motor loss affecting lumbar region and lower limbs, during the first two hours of postoperative admission. This triggered episodes of psychomotor agitation, in 42% of cases resolved by sedation, whereas in 9% requiring a neurological consultation. At any rate, not even a patient was transferred to the neurological ward.

Analysis of data led us to consider as vitally important a preoperative information on anesthetic technique performed. Moreover, it is essential a thorough explanation of these methods, especially when elderly patients are involved: their comprehension is not at its best and they cannot personally read up on such medical procedures (e.g. by reading newspapers, websites, etc.).

A noteworthy hypothesis could be that of involving patients' closer relatives in clarification of anesthetic procedure and of its effects, so that they could cooperate with medical staff and support the patient, thus avoiding a dangerous state of agitation. An opinion given by a caring relative could, above all for elderly patients, give credit to doctors' explanations.

Another solution could be that of continuously sedating patients after surgery, with the purpose of lowering cognitive ability during confinement to bed, while sensory and motor loss are in progress.

However, we recall that population examined by our research was much wider: they were all subject to subarachnoid block and the majority of them didn't report any problem regarding postoperative recovery. Thus, it is likely that providing some accurate information significantly contributed to this outcome.

Intraoperative psychomotor agitation is the second reason for customer dissatisfaction (18%). Despite a preoperative intramuscular injection of sedative – again providing proper information on it – in some cases it was necessary to intraoperatively administer an additional sedation by an intravenous injection of benzodiazepines. A prolonged surgical intervention, an ability to intraoperatively perceive sounds and voices of staff, together with the inability to move can cause intraoperative stress and agitation, especially in elderly patients: this doesn't facilitate surgeons in performing well an operation. On one occasion, it was necessary even to carry out general intravenous anesthesia under ventilation support.

This is why staff are urged to assess what pharmacological sedation could be better than the conventionally used one, remembering also that data pertaining to this category could be slightly underestimated, as intravenous sedation injected intraoperatively is likely to trigger a retrograde amnesia.

The third cause of customer dissatisfaction, namely a fear of subarachnoid puncture, was reported by 14% of surveyed

patients. But there needs to be considered that only 10% of this group had already undergone subdural anaesthesia before: this means that, after a first experience of this technique, usually fears are overcome. Patients justify their concern assuming that this might be connected to spinal cord punctures and/or risks of definitive paralysis affecting lower limbs. In this case too, it proves to be useful a further preoperative information explaining at least that the lumbar spinal block we carry out during urological surgery doesn't include risks of spinal cord punctures. To this end, it is newsworthy the hypothesis of creating a brief informative pamphlet that simply and effectively explains every step performed in subarachnoid anaesthesia; this could prevent customer dissatisfaction related to incorrect comprehension and/or information. Thus, the purpose would be to equalise high quality of services provided by anaesthetists to quality perceived by patients. As hospitals have to cope with a great number of preoperative visits without having enough time and staff available, an informative pamphlet could let staff save time, while keeping the underlying quality of information at high levels.

Intraoperative shivering and feelings of cold represent the fourth cause of customer dissatisfaction (11%): notwithstanding the employment of an heating blanket, liquid heaters and anti-shivering drugs, such feeling often causes discomfort in patients undergoing surgical intervention.

The fifth cause of customer dissatisfaction (8%) is related to organisation and medical care: it is a discrepancy existing between the doctor evaluating patients preoperatively, the one taking care of the intraoperative phase and, frequently, the third being responsible for the postoperative phase. Clearly, a trust-based relationship established between a doctor and a patient stems from familiarity, exchanging opinions and a continuous attendance. Currently, organisation of medical care is far from offering a one-to-one relationship, which is a path fraught with difficulties, since the number of patients and pathologies to treat is very large. Thus, we have to convey to patients the concept of an anaesthetic “department” they can address to, that replaces the individual specialist within the doctor-patient relationship. Obviously, this entails the need for a strong cohesion and unity among staff in communicating with customers.

Other reasons for customer dissatisfaction, even though reaching a less significant percentage, are reported but not

thoroughly analysed, since anaesthetic technique performed doesn't have a direct bearing on them. These reasons include: perioperative fast, little time for meeting patients under subintensive care unit, psychosomatic constipation based on emotional discomfort, and difficulty for patients to distinguish each specialist inside the operating theatre (e.g. surgeon, anaesthetist, nurses).

DISCUSSION

Nowadays, there is a necessity, not to be postponed even further, of creating national and local data bases, reporting standards of every health care company acting in our country, and evaluating their structures and organisation of working processes.

Critical examination of postoperative dissatisfaction is a key point in the process of quality improvement; its main goal is that of correcting both organisational and human errors.

Every organised system should be ruled according to the principle that, if the error (either human or systematic) underlying a trouble is identified, it has to be straight after corrected by reorganising the system or re-educating who is responsible. While in non-health care companies the consequence of disorganisation is just a loss of profits, in hospitals the price to pay has to be viewed also in terms of human lives; this makes even more pressing the need of a prompt reply by specialists.

A continuous evaluation of customer satisfaction confirmed that this facet plays a critical role in assessing quality of care, since it provides information on the extent to which medical staff have been successful in trying to match up with client expectations.

Evaluation of quality expressed by customers, in terms of satisfaction or dissatisfaction, gives rise to an exhaustive description of a structure, including its level of comfort, technical management and interpersonal relations; it is also able to provide an overall picture of its medical care. These are the reasons why it is considered to be important to gear up with proper methods for getting this essential point of view.

Data arising from our research show, above all, how subarachnoid anaesthesia is widely accepted and even required by a large majority of both surgeons and patients. Among patients surveyed, only 11% showed arguments for dissatisfaction.

It has to be considered that subdural anaesthesia well adapts especially to endoscopic urological surgery. Firstly, as already mentioned, because surgical duration is not always short, and this would subject elderly patients to an excessive dosage of halogenated vapours and/or narcotics. Secondly, despite such surgery causing not much pain, even a low level of V.A.S. at the awakening can contribute to triggering hypertension, which, in turn, can often contribute to causing perilous postoperative bleeding at the incision site: this is likely to bring about many further complications, possibly leading to reoperation.

Collected data confirm how an accurate information can positively affect surgical outcomes. Considering the advanced average age of patient population surveyed, it is essential an highly tolerant and continuous care of medical staff in informing patients; but this could contrast with the sizeable workload – attendance, bureaucracy etc. – to be carried out by the hospital team. Preoperative evaluation should have spacious structures and long time available, and should be performed by highly specialised staff. It undoubtedly represents a main stage of a patient's recovery process and, apart from being a valuable “calling card” for the Operative Unit, it is the basis for a trust-based relationship and for accurate information to provide to customers; this, in turn, plays a critical role in the achievement of customer satisfaction and in preventing perioperative difficulties and medical litigation.

Besides, it arises from data a necessity to re-examine anaesthetic premedication, or to combine it with a light intraoperative sedation that allows to control patients' emotional state without altering their consciousness. As far as endoscopic urological surgery is concerned, even a sudden cough can be very perilous by causing an increase in endoabdominal pressure, an abrupt movement of bladder, and thus, a risk of perforation.

Even if it is not correlated to our study, and thus not having reference to the performance of locoregional anaesthesia, it is interesting to analyse a minor cause of customer dissatisfaction: a discrepancy occurring between the doctor caring a patient in the ward and the one monitoring intra- and postoperative management of anaesthesia. It is widely accepted that a trust-based relationship between patients and anaesthetists, already hard to establish due to both organisational and cultural issues, can develop more easily if it involves always the same referent. As already stated, the Operative Unit should convey to patients the idea of an

anaesthetic “department”; in this way, patients' addressing to the overall class of specialist would replace their relation with an individual doctor. This purpose could be achieved, for instance, by handing to patients undergoing surgical intervention an informative pamphlet showing staff and activities of the Operative Unit, possibly including a phone number for any eventual issue related to perioperative management of anaesthesia.

Nevertheless, issues discussed so far concerning patients undergoing urological surgery who were dissatisfied with subdural anaesthesia management, have to be considered in the light of a much wider sample of patients that were by and large highly satisfied with techniques performed.

Thus, also in this case, locoregional anaesthesia proved to be effective, above all in a patient population frequently showing a bad condition.

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