

Good medical practice for regional block's procedures

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Scientific and technological advances, changes in the social environment of doctor's activities have caused a lot of changes in medicine during recent years. The perioperative period is emotionally stressful for patients because of their fears about anesthesia. The anesthesiologist's duty is to guide the patient through this period by managing his fears, establishing the confidence. The patient also has to be aware of the possible risks related to anesthesia.

According to the consent process, the patient should be supplied with comprehensive information before the invasive procedures: risks and benefits, all possible alternatives. This enables the patient to make a conscious choice and increases the participation in his own care. Information about postoperative pain treatment would be helpful as the pain relief is influenced by patient's knowledge and beliefs.

In this regard, regional anesthesia can provide a safer alternative to general anesthesia and prolonged postoperative analgesia. Continuous infusion, which is the actual clinical standard, allows to adjust the rate of infusion and concentration of drugs according to patient's response and to maintain a constant drug level over time. New techniques of the needle tip guidance under ultrasound imaging reduce the fears about the nerve damage as a smaller volume of local anesthetic can be placed at very precise points of the targeted nerve.

Continuing professional education is obligatory for good medical practice and professional standards. It includes the development of theoretical knowledge and practical skills in the techniques, communication, teaching, management and clinical responsibilities.

Key words: informed consent, pain, nerve block, education

INTRODUCTION

Doctors are facing changes in medicine caused by scientific and technological advances as well

as in the social context of doctor's work. Patients are getting better informed about health matters and more involved in decisions about their health care. This should be accepted by doctors and used for better co-operation with the patient. Patient's perception is an important component of the evaluation of health care quality, especially the non-technical aspects of anesthesia care. This perception is influenced a lot by the patient's

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impressions in the perioperative ambience: what he hears, sees and feels. Thus, the patient's satisfaction with medical care depends upon a balance between expectations and perception. The perioperative period is completely unknown and intimidating for the most of the patients, however, a good etiquette creating an environment of respect and care would allow the patient to relax, hence enhancing patient's satisfaction (1).

INFORMED CONSENT

It is a legal and ethical principle that valid consent must be obtained before starting treatment, physical investigation, or providing personal care for a patient (2).

The perioperative period is emotionally stressful for many patients as they may have fears about anesthesia (loss of control, fear of no waking up, waking up during surgery, postoperative nausea, confusion, headache, pain and paralysis). The anesthetist can alleviate many of these fears and foster trust by interviewing, reassuring the patient and keeping the patient informed about aspects of anesthetic management as well as possible alternatives. It is the anesthetist's duty to disclose the risks associated with anesthesia-related procedures (3). The informed consent process improves patient care increasing patient's participation in his own care, resulting in patient compliance and self-monitoring (4).

The consent process requires the patient to be apprised of the risks as well as the benefits prior to any invasive procedure, so patient can make a fully informed choice. It is important that patient is not only given the appropriate information, the anesthetist has to assure that the information was understood (3). Unfortunately, neither benefits nor the risks of peripheral nerve blocks can be objectively and accurately quantified (2). However, clinicians have to give an unbiased opinion, based on objective assessment of the best evidence available (despite the evidence base for complications is particularly poor), also evaluating and keeping in mind personal audit data (5).

POSTOPERATIVE PAIN MANAGEMENT

Severe postoperative pain and the stress response to surgery can cause increased morbidity and mortality (6). Postoperative pain management not only

minimizes patient's suffering but also can facilitate rapid recovery and early discharge, reducing hospital costs (7). Pain is a personal, subjective experience that involves sensory, emotional and behavioral factors. Individual variations in response to pain are influenced by genetic or cultural background, age and gender. Some patient groups (like drug addicts) are at risk of inadequate pain control and require a special attention. Usually patients are not familiarized with pain treatment techniques, however, as the success of pain relief is influenced by their knowledge and beliefs, it is helpful to give patients a detailed information about the postoperative pain and treatment. Scoring levels of pain is only one component of a wide range of quality assurance methods ultimately saving time and efforts of staff, allowing to avoid expensive legal cases for trusts. However, the most important result can be the best analgesia for our patients (8).

SAFETY OF REGIONAL ANESTHESIA

Regional anesthesia and analgesia offer many advantages over general anesthesia, but often these advantages (mainly postoperative pain relief) cease when the nerve block wears off (9). Peripheral nerve blockade can be used for many surgical procedures without a significant disruption of the autonomic function. The majority of regional techniques can be performed on awake or lightly sedated adult patients with a minimal discomfort. Continuing a verbal contact with patients has distinct advantages in the likelihood of inadvertent events, both for recognition and management.

Continuous infusion is the actual clinical standard for the care in the perioperative period. Perineural infusions, especially if a patient-controlled bolus regimen is incorporated, can provide better analgesia (10). It allows to maintain a constant drug concentration over time and to avoid peaks and troughs in analgesia, also to reduce an incidence of adverse effects (11). Using this technique, it is possible to titrate the rate of infusion and concentration of drugs adapting them to different patient responses. Some patient controlled regional analgesia techniques can also be applied in day-surgery patients for treatment of postoperative pain at patient's home (12).

Neurostimulation does not prevent paresthesias or intraneural injection during peripheral nerve

blockade. Variations in fat tissue distribution make difficult to establish a single factor as the cause of nerve damage when performing blocks in different peripheral nerves. Therefore, each block needs a particular consideration in this regard. Superior location of the target nerve is very important for the optimization of peripheral nerve blockade technique. This improvement can be achieved by stimulating catheter placement thus increasing the percentage of successful blocks. New techniques on needle tip guidance under ultrasound imaging also improve the visualization; in addition, these techniques open a new field for the research using smaller volumes of local anesthetic applied at very precise points of the targeted peripheral nerve but outside of nerve fascicles reducing risk of neurological complications (13).

Nerve damage is the most feared complication after regional anesthesia for all the parts – patient, anesthesiologist and surgeon. The reason is that the recovery may take weeks, months or even years. The methanalysis of R. Brull et al. showed that the rate of neurological complications after central neuraxial blockade was less than 4 : 10,000 (0.04%). The rate of neuropathy after peripheral nerve blocks was higher – up to 3 : 100 (3%). However, permanent neurological injury after regional anesthesia is rare in contemporary anesthetic practice (14). Anatomical knowledge, excellence of regional anesthesia practice, experience of the anesthesiologist and respect of elementary rules allow keeping the complication frequency very low (15).

Clear department's guidelines should be specific to the techniques used and based on the highest level of available recent evidence (1). Comprehensive and systematic documentation will assure continuity of care and low complication incidence (5).

COMPETENCE BASED EDUCATION

Good medical practice requires continuing education and professional development as an integral part of the maintenance of professional standards (16). This includes both theoretical knowledge and the development of skills needed in the fields of communication, teaching, management and clinical duties (1, 17).

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GEROS PRAKTIKOS TAISYKLĖS ATLIEKANT VIETINĘ NEJAUTRĄ

Santrauka

Mokslo ir technologijų vystymasis, socialinės aplinkos kaita pastaraisiais metais sąlygoja daugybę medicinos ir gydytojų veiklos pokyčių. Perioperacinis periodas, o ypač anestezijos baimė, sukelia didžiulį stresą pacientui. Gydytojo anesteziologo pareiga yra nuraminti pacientą, įgyti jo pasitikėjimą bei perspėti dėl galimų anestezijos sukeltų komplikacijų.

Prieš pasirašydamas sutikimą pacientas yra informuojamas apie riziką ir naudą, invazinės procedūros alternatyvas. Turėdamas sąmoningo pasirinkimo galimybę jis dalyvauja savo paties gydyme. Perioperacinio skausmo malšinimui didelę įtaką turi paciento supratimas ir įsitikinimai.

Vietinė nejautra yra saugi bendros anestezijos alternatyva, ji gali prailginti pooperacinės analgezijos trukmę. Tęstinė vietinė infuzija jau tapo klinikiu nuskusminimo standartu. Ji leidžia koreguoti ir palaikyti reikiamą vietinio anestetiko infuzijos greitį, vaisto koncentraciją priklausomai nuo konkretaus paciento atsako į gydymą. Viena pavojingiausių vietinės anestezijos komplikacijų yra nervo pažeidimas. Panaudodami naujaują ultragarso vaizdo techniką nervo blokada dabar galime preciziškai suleisti mažesnę vietinio anestetiko kiekį tiksliai aplink nervą šio nesužalodami.

Norint laikytis geros praktikos taisyklių ir standartų, būtinas nepertraukiamas profesinis mokymas, kuris apima ne tik teorinių žinių gilinimą, bet ir praktinių įgūdžių tobulinimą atliekant procedūras, bendraujant, mokant kitus, gydant ir prisiimant atsakomybę.

Raktažodžiai: paciento sutikimas, skausmas, nervo blokada, kompetencijos