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Preparing psychiatric patients for surgery under general anaesthesia

The problem of withdrawing or continuing the administration of psychiatric drugs in patients suffering from psychiatric diseases and disorders before surgery and general anaesthesia has been discussed for many years. In life threatening situations when surgery is necessary it is not possible to prepare a patient for the operation by gradual withdrawal of psychiatric treatment or a change for drugs which produce fewer interactions between administered drugs. However, in case of elective surgery the possibility of complications connected with a higher peri-operative risk should be considered, and also, when psychotropic drugs are discontinued, with the withdrawal symptoms.

So far the pre-operative management is based mainly on the experience of patient's doctor in charge. There are no guidelines in the literature on the management of patients regularly taking psychotropic drugs. In the literature available in MEDLINE most of presented articles describe complications resulting from continuation or withdrawal of psychiatric treatment and others describe the effect of particular psychotropic drugs in relation to the perioperative risk. The development of psychopharmacology and continuous introduction of new psychoactive substances to the pharmaceutical market makes it quite difficult to elaborate clear guidelines on the preoperative management of psychiatric patients. In February 2006 Huyse et al. attempted to draw up guidelines on the peri-operative management in psychiatric patients (2). Lithium, one of the mood tabilizing drugs, occurs only in an oral form (capsules, tablets, syrup), therefore there is no possibility to change its form of administration to intravenous or intramuscular in case of patients requiring the continuation of treatment and undergoing a preoperative regime. In the literature there are some cases of dysfunction of sinus node, which may lead to atropine resistant bradyarrhythmia in the course of anaesthesia, both in recommended and toxic level of this drug in blood serum, which may occur at the time of anaesthesia (2). Although changes in the ECG tracing manifested by flattening of T deflection and disturbances in the heartbeat, including ventricular arrhythmia, are mentioned among undesirable side-effects of lithium administration, this drug is quite well tolerated by the patients with co-existing cardiological problems. From the psychiatric point of view rapid withdrawal of this drug (earlier than two weeks) is not recommended because of the possibility of acceleration of changes in mood phase. Huyse suggests the withdrawal of administering lithium in the preoperative period, at least 72 h before the planned surgery (no somatic withdrawal symptoms). According to this author

the only indication for the continuation of the administration of the drug is minor surgery performed under local anaesthesia. After surgery, when the renal function and electrolytes level have been checked, the treatment with lithium may be re-introduced.

In the 80's of the 20th century the problem under discussion was the necessity to discontinue the administering of monoamine oxidase inhibitors in patients undergoing surgery and general anaesthesia. As in case of lithium there are no forms of drugs enabling parenteral administration of these drugs. Despite earlier reports stating that withdrawal of these drugs is not justified, it is now considered that antidepressant drugs from MAO inhibitor group should be withdrawn at least two weeks before planned anaesthesia (1).

The replacement of irreversible MAO inhibitors with reversible ones (e.g. moclobemide, toloxatone, amiflamine) seems beneficial and it should be done several weeks before the planned anaesthesia (2). Inhalatory anesthetics (halothane, enfluran, isofluran) seem to be the safest for anaesthesia. The administration of petidine is absolutely contraindicated because of the possibility of severe excitability reaction including not only psychomotor excitation but also the increase or decrease in the arterial pressure, fever, convulsions, coma which may eventually result in death of the patient. Exceptions are minor operations performed under local anaesthesia as it is in case of lithium.

Kudoh A. et al. studied possible benefits from the withdrawal of antidepressant drugs of the first generation (imipramine, clomipramine, maprotiline and mianserine) in patients taking these drugs for a long time while preparing these patients for orthopedic surgery under general anaesthesia (propofol, fentanyl, vecuronium, isofluran in nitrogen oxide) (4). In the group of patients continuing treatment and in the patients where treatment was discontinued dysrhythmia and arterial hypotension occurred with the same frequency. It was found out that withdrawal of these drugs does not decrease the frequency of arrhythmia and intra-operative arterial hypotension but may increase the symptoms of depression and phobia.

Special attention should be paid to possible symptoms resulting from the rapid withdrawal of tricyclic antidepressants (e.g. amitriptyline, doxepine, clomipramine), which may cause the following symptoms: parkinsonism, acathisia, dyssomnia and dysfunction of the digestive system, and these symptoms appear on the second day after the withdrawal and last for about 14 days (2). There is no unanimous opinion about the necessity to discontinue these drugs, however, withdrawal should be considered taking into account a possible profound effect on the cardiovascular system.

The rapid withdrawal is also not recommended in case of SSRI because of significant withdrawal symptoms: dizziness, anxiety, excitation, crying. It is recommended to avoid a combination of these drugs with opioid analgetics in the course of anaesthesia because they increase the risk of incidence of serotonergic symptom (2).

Great care should be taken in the peri-operative period in relation to antipsychotic drugs. Continuous preoperative use of antipsychotic drugs increases the risk of intraoperative arterial hypotension in the course of general anaesthesia. Kudoh et al. studied 101 patients taking antipsychotic drugs for a long time (5). The patients were divided into two groups: Group 1 included patients taking psychiatric drugs also in the peri-operative period, and Group 2 included patients where these drugs were withdrawn 72 h before the elective surgery. Statistically significant differences in the incidence of psychiatric disorders were observed, also of hallucination and delusion type. A great majority of these disorders was observed in the group where psychiatric drugs were withdrawn. Perioperative arterial hypotension was observed in 16% of patients from Group 1 and 13% from Group 2. Arrhythmia was found in 6% of patients from Group 1 and 8% from Group 2. Significantly higher frequency of psychiatric disorders in patients who discontinued taking antipsychotic drugs

contributed to the increase in the post-operative complications resulting from uncontrolled touching of postoperative wounds or removing intravenous insertions (venflons), thus increasing the length of hospital stay, and therefore increasing the cost of hospitalization. For this reason it is recommended to continue the psychiatric treatment in the peri-operative period (i.e. 24 h after surgery which is connected with the period of half-life of antipsychotic drugs from 8 h to 24 h). But there are also some complications resulting from the administration of these drugs. The risk of deep arterial hypotension was described in patients taking risperidone, an antipsychotic drug of second generation, during spinal anaesthesia with bupivacaine for hip surgery (12).

The problem is that not all patients taking psychotropic drugs inform the doctors about it. These patients, in case of emergency surgery, are at the risk of complications resulting from rapid withdrawal of these drugs. In every case the patient taking psychiatric drugs should be supervised not only by the doctor preparing him for surgery and anesthesiologist who will determine the degree of risk during surgery, but also by the internist and psychiatrist to design the best schedule for continuing or discontinuing the drugs used in the psychiatric treatment.

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SUMMARY

Preparing psychiatric patients for surgery under general anaesthesia is still a real medical problem. The problem of withdrawing or continuing the administration of psychiatric drugs in those

patients in the peri-operative period has been discussed for many years. The literature suggests that in every case the patient taking psychiatric drugs should be supervised not only by the surgeon and anesthesiologist preparing him for surgery, but also by the internist and psychiatrist to design the best schedule of administration of the drugs used in the psychiatric treatment during the peri-operative period.

Przygotowanie pacjentów leczonych psychiatrycznie do zabiegów operacyjnych w znieczuleniu ogólnym

Przygotowanie pacjentów leczonych psychiatrycznie do zabiegów operacyjnych w znieczuleniu ogólnym stanowi nadal realny problem medyczny. Dyskusja nad zasadnością odstawienia lub kontynuacji stosowania leków psychiatrycznych u tych pacjentów w okresie okołoperacyjnym trwa od wielu lat. Piśmiennictwo sugeruje, że w każdym przypadku pacjent przyjmujący leki psychiatryczne powinien pozostawać pod opieką nie tylko chirurga i anestezjologa, którzy przygotowują go do zabiegu operacyjnego, ale także internisty i psychiatry w celu ustalenia schematu stosowania leków psychiatrycznych w okresie okołoperacyjnym.