

# Postoperative Delirium In Urgent Surgery

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## ABSTRACT

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## Short Communication

**Introduction:** Modern literature is increasingly indicating the phenomenon of anesthesiologic “nightmare” in the form of postoperative delirium (POD) [1]. Postoperative delirium can be presented as an altered mental state of the patient immediately after surgery in general or regional anesthesia, where the patient can not mentally and physically satisfy the needs and expectations in relation to the condition in which he/she is. It may have fluctuating currents and occur immediately after a patient’s general anesthesia or a few days after surgery. The clinical picture of the POD varies. Patients can express through hyper and hypoactivity or mixed, as a cognitive and/ or motor deficiency. In addition to the clinical picture of anxiety, irritability, postoperative delirium can also be manifested by slower patient evasion from general anesthesia and passivity, and lack of attention, reduced mobility, disturbance of orientation in time, space and faces, difficulties in providing simple responses in the postoperative course. POD can be considered one of the early postoperative complications.

There are many factors that influence the POD in addition to surgery: drugs used before and during anesthesia, length of surgery, age, chronic sedative and alcohol use, preoperative mental status of the patient, anxiety due to unpreparedness for surgery. The frequency can be from 10 to 70% of the patients. The POD can be an introduction to the subsequent development of postoperative cognitive deficits, which can last for months and which reduces the quality of life and can also lead to an increase in mortality.

Progress in the anesthetic approach to the urgent patient and the use of various drugs such as Haloperidol or Dexmetomidine in preventing the occurrence of postoperative delirium, did not significantly reduce the incidence of postoperative delirium occurrence in emergency surgery, especially among patients who are older, on chronically treated with sedatives, or the ones who consume alcohol more frequently. The literature points out that postoperative delirium is more common in the elderly population undergoing emergency surgery. The use of sedatives and anticholinergics in premedication, especially in geriatric patients, is in favor of an increased incidence of delirium. The incidence of delirium has been increased among the younger population, who were preoperatively anxious, used sedatives and / or alcohol. Emergency surgery causes the patients not to have adequate preoperative mental preparation due to the urgency of the surgery, as well as unplanned long-term surgical procedures that may affect the occurrence of delirium in the immediate postoperative course. A good recognition of the cause the POD in each individual patient undergoing an urgent surgical procedure helps us to plan preventive drug use which, if not remedied, will at least mitigate the clinical picture of the POD [2-8].

## Material and Methods

A prospective study, for a year, covered 100 patients who were admitted to the Emergency Center, Clinical Center of Vojvodina.

After examination, taking anamnestic data and diagnosis, they are subjected to emergency abdominal (cholecystectomy and appendectomy) or orthopedic (Fractura femoris) surgery in general anesthesia within 4 hours of admission. Various parameters were monitored during the study: age of the patient, mental status before and after surgery (mini mental test, Montreal cognitive test), alcohol consumption, sedation and / or anticholinergic use before and during surgery, length of surgery and mental status after waking up of a patient from general anesthesia, within 2 hours. The study included patients aged over 18 years, ASA I, II, III, IV groups, who voluntarily and with the signed consent accepted to participate in the study.

The Montreal cognitive test as a short mental test that we used before and after surgery, is a mini mental test that takes about ten minutes to resolve and which is greatly conceived for the assessment of higher mental functions. It includes attention, concentration, memory, executive functions, language, visual construction abilities, conceptualization, computation and orientation. The total number of points on the test is 30. 26 out of 30 points is considered a normal result. From the study, we excluded patients who had mental illnesses such as Dementia, Alzheimer's disease, and as well as patients who had cerebrovascular injury with consequent mental disorder. Also, the study was excluded from vitally endangered patients who were postoperatively placed in the intensive care unit.

## Results

The results obtained showed a statistically significant fact that fewer points on the test, from 11 to 20 points, received older patients who underwent an urgent surgical procedure. These participants are over 60 years of age and make for about 27% of all subjects that participated in the study. Also, statistically significant data were obtained that patients who used a higher amount of sedatives during emergency surgery, 47% had a worse test result than under 20 points due to increased preoperative anxiety. The result showed that the use of anticholinergics (Atropin sulphate), primarily in urgent gall bladder operations, especially in the elderly population, over 60 years, reduces the number of points on the test. Also, patients who consumed alcohol immediately prior to urgent surgery had poorer test results, regardless of age, 7% of patients had less than 10 points. We also received information that in emergency surgeries in which general anesthesia lasted more than 120 minutes, the number of points on the test was smaller, 40% of those examined ranged between 11-20 points.

## Conclusion

Based on the obtained results, we can conclude that the older population is more susceptible to postoperative delirium, especially in emergency surgery situations, which they carry, unpreparedness for surgery, increased use of sedatives, unpredictability of the duration of surgery, anesthesia, as well the use of anticholinergics, which is sometimes impossible to avoid in operative procedures such as gall bladder surgery. The results can focus on the use of Haloperidol in the early phase of delirium, to alleviate clinical picture and to prevent severe delirium symptoms after emergency surgery. Haloperidol has proven to be a drug of choice in some studies. The results of the study suggest that in cases of emergency surgery, the use of protocols for postoperative delirium should be planned regularly to prevent or at least mitigate the clinical picture of delirium. This can lead to complications postoperatively, as well as to severe and lasting consequences in the form of different cognitive deficits and reduction quality of [9].

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