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Postoperative cognitive decline in the elderly

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After attending the presentation, the participants will be able to discuss the incidence and clinical features of postoperative delirium (PD) and postoperative cognitive dysfunction (POCD), understand mechanisms and etiology of PD, recognize ongoing controversies surrounding the time course, the severity and even the clinical relevance of POCD and identify subgroups of patients who are at higher risk for PD and POCD and assess the preventive strategies to reduce incidence of these complications. The brain is vulnerable during the perioperative period. Neurobehavioral disturbances are common complications of surgery, manifesting in three distinct forms: Emergence delirium, postoperative delirium and POCD. The relationship between these conditions has yet to be fully elucidated. Although not limited to geriatric patients, the incidence and impact of both are more profound in geriatric population. Delirium has been shown to be associated with longer and more costly hospital course and higher likelihood of death within 6 months or postoperative institutionalization. POCD is a condition characterized by deterioration of cognitive performance after surgery presenting as impaired memory and or concentration. Perioperative physiological derangements (e.g., hypotension), anesthetics, duration of surgery, respiratory complications have been suggested as possible causes but only age and limited education has proven to be consistent risk factors in most studies. Current research suggests that patients with preoperative cognitive impairment are at higher risk for POCD because of their already compromised status and their potential vulnerability to worsen into dementia due to a less cognitive reserve. In this presentation, we review the definitions, etiology, prevention and treatment of both disorders in patients undergoing major non-cardiac surgery.

Biography

Alex Bekker is an internationally recognized expert in neuroanesthesia and is frequently invited to speak at Grand Rounds and Scientific Panels. He has been active in research for many years. He is the author of 62 peer reviewed publications, 6 US patents, 32 educational reviews and more than 100 abstracts. His work has focused on perioperative brain protection, neuroinflammation, and clinical pharmacology. He was a PI of numerous clinical trials, including studies sponsored by the National Institute of Aging. He serves on the editorial board of the *Journal of Neurosurgical Anesthesiology* and is an *ad hoc* reviewer for 15 peer-reviewed journals, including NEJM, Anesthesiology, Neurosurgery, and Anesthesia and Analgesia. He is spearheading a campaign to improve the efficiency of Perioperative Services as well as Patient Safety at the University Hospital

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