Editorial

Surgery in Elderly

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Caring for older patients in need of surgery presents a challenging medical situation. Advances in surgical and anaesthetic techniques combined with sophisticated perioperative monitoring have contributed to an increasing number of older adults undergoing surgery. The clinical paradigm involves identifying coexisting disease, defining the urgency of the intervention, and predicting postoperative complications based on the type of surgery planned.

In the present issue Khoja H R et al have evaluated the risk factors and outcome of surgery in elderly.[1] This study highlights significant association of comorbid illnesses like COPD, ischemic heart disease, hypertension and diabetes mellitus in elderly patients. Anaemia, renal dysfunction and low serum albumin level were also frequently present in these patients. Exploratory laprotomy was the commonest procedure, performed in 25.8% followed by hernioplasty in 20.4% of patients. Higher number of exploratory laprotomy shows difficulty in pinpointing the diagnosis in elderly. Early postoperative complications were septicaemia, multi-organ dysfunction, altered sensorium and electrolyte imbalance while late were wound complication. Higher incidence of mortality (17.2%) was observed, commonest being cardiac diseases (37.5%), followed by pulmonary diseases (25%), septicemia (18.6%), renal (12.5%) and thrombo-embolic (6.3%) causes. Mortality in emergency procedures was far greater than elective procedures.

Advanced age, poor functional status at baseline, impaired cognition, and limited support at home are risk factors for adverse outcomes. However, when age and severity of illness are directly compared, severity of illness is a much better predictor of outcome compared to age. In one study, the mortality rate for patients older than 70 years undergoing elective cholecystectomy was nearly 10 times that for younger patients. In a study of abdominal operations, the mortality rate for patients aged 80-84 years was 3%; the rate was 9% for patients aged 85-89 years and 25% for those older than 90 years.[2]

Pain management is a crucial aspect of perioperative care. Depression, anxiety, fear, fatigue, and cognitive impairment can affect the perception of pain. Neuropsychiatric problems are common among older patients, and assessment of preoperative mental status is critical to understanding the etiology of postoperative cognitive status. Delirium, dementia, and depression are the most common important syndromes to consider.

Cardiac complications are among the most common and most serious postoperative problems. The strongest predictors of adverse cardiac outcomes are recent myocardial infarction (MI), uncompensated congestive heart failure (CHF), unstable ischemic heart disease, and certain cardiac rhythm disorders. A practice guideline for perioperative cardiovascular evaluation for noncardiac surgery is proposed by the American College of Cardiology and American Heart Association Task Force.[3] The patients are assessed with a stepwise approach according to the clinical predictors, the risk of the proposed operation, and the functional capacity.[4]

If the initial evaluation indicates mild or moderate hypertension and no associated metabolic or cardiovascular abnormalities, no reason exists to delay the surgery. Antihypertensive medications should be continued during the perioperative period; however, a diastolic blood pressure of 110 mm Hg or higher requires control before undergoing surgery. In the postoperative period, acute elevations in blood pressure are common. Labile blood pressures, sometimes with significant hypotension, can occur in patients with hypertension. Occasionally, uncontrolled pain, ischemia, fluid overload, emergence excitement, electrolyte abnormalities, anxiety, or a distended bladder can cause hypertension. As much as 30% of postoperative hypertension is idiopathic and resolves within 3 hours.

An estimated 20-30% of patients undergoing general surgery without prophylaxis develop deep vein thrombosis, and the incidence rate is as high as 40% in those undergoing hip and knee surgery, gynecologic

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cancer operations, open prostatectomies, and major neurosurgical procedures. Fatal pulmonary embolism accounts for a larger proportion of operative deaths in elderly persons.[5]

Pulmonary disease increases the risk of postoperative complications, accounting for 40% of postoperative complications and 20% of deaths. Age-related changes, such as increased closing volumes and decreased expiratory flow rates, predispose older persons to pulmonary complications. The additive effect of supine position, general anesthesia, and abdominal incisions leads to a significant reduction in functional residual capacity and an associated increase in airway resistance. The combination of these effects predisposes patients to atelectasis, with the risks of hypoxemia and infection.

Diabetes mellitus is an intermediate clinical predictor of perioperative myocardial ischemia not only because of the association between diabetes mellitus and coronary artery disease but also because of the increased incidence of other perioperative complications, including ketoacidosis, stroke, renal failure, and sepsis.

Renal disease has an important impact on patient morbidity and the postoperative course. Renal disease may not be considered in older patients because the reduction in creatinine clearance is usually not reflected by a rise in the serum creatinine level. The serum creatinine level must be adjusted for age and the decrease in lean body mass.

A preoperative assessment is useful to identify factors associated with increased risks of specific complications and to recommend a management plan that minimizes the risks. Each person should be assessed individually, and judgment should be based on an individual's problem and physiologic status, not on age alone.[6] Age is a risk factor for surgery, but coexisting disease is more important than age alone. The risk of surgery varies with the procedure. Non-body cavity surgery, with the exception of hip fracture repair, is usually tolerated well. Emergency surgery should be avoided, if possible, by elective planning.

Individualized care which includes consultation with specialists in multiple disciplines, such as nurses, social service counsellors, pharmacists and physical and occupational therapy whenever possible promotes an optimal patient outcome after surgical intervention in elderly.

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