4

General surgery

Post operative care

Post operative observation:

•The aim of postoperative care is to provide the patient with as quick, painless and safe a recovery from surgery as possible. This requires the appropriate knowledge and skills to manage medical, as well as surgical, postoperative problems.

•The patient’s vital signs (including pulse, blood pressure and pulse oximetry reading), level of consciousness, pain and hydration status are monitored in the recovery room and supportive treatment is given. In recent years, patient observations have been collated in recording systems designed to provide an early warning of clinical deterioration.

Surgery-specific observations such as Doppler flow for a free flap, regular neurological evaluation and laboratory tests, such as blood gase analysis, should also be performed when necessary.

The patient can be discharged from PACU (post anaesthetic care unit)when they fulfill the following criteria:

•● Patient is fully conscious.

•● Respiration and oxygenation are satisfactory.

•● Patient is normo thermic, not in pain and not nauseous.

•● Cardiovascular parameters are stable.

•● Oxygen, fluids and analgesics have been prescribed.

•● There are no concerns related to the surgical procedure.

**IMMEDIATE RESPIRATORY POSTOPERATIVE COMPLICATIONS**

•AIRWAY

•Upper airway obstruction is one of the commonest immediate postoperative complications and can be due to laryngospasm, persisting relaxation of airway muscles, soft tissue oedema, haematoma, vocal cord dysfunction or foreign body.

•Vigilance and early intervention are necessary to prevent harm to the patient. Most interventions are simple and involve manual support of the jaw or insertion of an oral or nasal airway.

•RESPIRATION

•The residual effects of anaesthetic drugs can contribute to reduced or impaired adequacy of ventilation postoperatively.

•Continuous pulse oximetry and respiratory rate evaluation can identify respiratory compromise and consequent hypoxia early.

•Supplemental oxygen should be given to all patients in PACU until adequate respiration and oxygenation are restored

• HYPOXAEMIA

•This may occur, in addition to the situations already described above, as a consequence of acute pulmonary oedema (fluid overload, cardiac failure, post obstructive), bronchospasm, pneumothorax, aspiration and rarely pulmonary embolism.

**IMMEDIATE CARDIOVASCULAR COMPLICATIONS**

HYPOTENSION may be due to hypovolemic, myocardial impairment or vasodilatation from subarachnoid and epidural anesthesia. Other causes of hypotension such as surgical bleeding, sepsis, arrhythmias, tension pneumothorax, pulmonary embolism, pericardial tamponade and anaphylaxis should also be considered in the differential diagnosis.

•Treatment should be aimed at the cause. Postoperative hypotension leading to end-organ dysfunction, (e.g. decreased urine output <0.5 mL/kg/h, decreased level of consciousness, myocardial ischaemia, capillary refill >2 seconds) needs immediate management with fluid and may require the use of vasopressors and inotropes.

•HYPERTENSION

•Hypertension is also common. It may be due to pain, agitation, anxiety, bladder spasm secondary to urinary catheterization or pre-existing poorly-controlled hypertension.

•Consequences include bleeding from vascular suture lines, cerebrovascular haemorrhage and myocardial ischemia or infarction.

 •**MYOCARDIAL ISCHAEMIA**

•Patients with a history of cardiovascular disease or with known cardiac risk factors undergoing major surgery are at risk of major adverse cardiac events.

•Symptoms can include retrosternal pain radiating into the neck, jaw or arms, nausea, dyspnoea or syncope, but many events in the perioperative period are silent.

ARRHYTHMIAS When they occur in the postoperative period, arrhythmias can cause hypotension, myocardial ischemia and cardiac arrest. Tachycardia (sinus or supraventricular) may occur due to anxiety, pain, myocardial ischemia or infarction, hypovolemia, sepsis or hypoxia in the postoperative period. Consideration should be given to correction of the underlying causes and rate controlled with β-blockers, amiodarone or cardioversion, depending on the state of the patient.

•Sinus bradycardia may be normal in athletes but it may also be associated with hypoxia, preoperative β-blockers, digoxin and increased intracranial pressure.

•STROKE

•Stroke is a recognized complication of carotid endarterectomy surgery both early (secondary to emboli) and later (secondary to cerebral hyper perfusion syndrome).

•It is also a recognized consequence of both hypotension and hypertension. Thrombolysis may be indicated but the neurology and surgical teams must discuss together the risks and benefits of such a treatment plan.