Preoperative preparations

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Obtaining consent

The patient has fundamental and ethical right to determine their wellbeing and a valid consenting process for invasive procedures including surgery.

The doctor obtaining the consent should ensure that the patient is:

Competent

Fully informed

Voluntarily agrees to the procedure

The key to good consenting is good communication: It may be necessary to use a translator, and some trusts will not accept consent gained by using patient's relatives as translators. If you are the doctor providing treatment or undertaking an investigation, it is your responsibility to discuss it with the patient and obtain consent.

Consent must be given freely: patients may not be put under duress by clinicians or police.

Declare any potential conflicts of interest: The amount of information should be sufficient to allow a mentally competent patient to make an informed decision

Informed consent

There are five aspects that the patient must understand to give informed consent:

The reason for carrying out the procedure: The patient needs to understand the nature of their illness and its prognosis.

What the procedure involves: Where and how long is the scar; what is being removed; what prosthesis will be implanted; will there be drains?

The risks of the procedure: Specific to the procedure e.g. stoma and in general (e.g. anaesthesia, prolonged bed rest causing DVT)

The benefits of the procedure: Improvement in symptoms or prognosis, or purely diagnostic.

Alternatives including conservative treatment, with their advantages and disadvantages.

In assessing a patient's fitness for surgery, it is worth going through the following:

1) History of presenting complaint.
2) Past medical history.
3) Past surgical history.
4) Past anaesthetic history.
5) Social habits.
6) Drugs.
7) Allergies.

History of presenting complaint

A long history of the condition that is scheduled for elective surgical treatment may afford time in which the patient's comorbid conditions can be improved before surgery.

Past medical history

Diabetes whether controlled by insulin, oral hypoglycemic drugs & diet.
The blood glucose level should be less than 13mmol/l at the commencement of an elective procedure, and maintained between 8_11mmol/l during the perioperative phase, monitoring blood sugar and potassium levels hourly during the operation.

Respiratory disease. What is the nature of the chest problem? (as asthma or COPD etc.) & is the breathing as good as it can be? Or is the patient in the middle of an exacerbation? *Cardiac disease*. .Has the patient had a recent MI or does he has stable or unstable angina. *Rheumatoid arthritis* often associated with an unstable cervical spine, so a cervical spine X-ray is indicated. *Also such patients usually receive nonsteroidal anti-inflammatory drugs and steroids*.

Rheumatic fever or valve disease or the presence of prosthesis – necessitating prophylactic antibiotics.

Sickle cell disease. A hemoglobin electrophoresis should be checked in areas where Sickle cell disease is more prevalent or if the history is suggestive.

Chronic renal failure: In chronic renal failure (CRF) there is hyperkalaemia & the fluid balance is difficult to achieve. *Uremia impairs platelets function but the effect can be reversed by using desompressin*.

Clearance of narcotics is poor and postoperative narcosis should be reversed by the opiate antagonist naloxone. Patients with CRF may require dialysis prior to surgery.

Hypertension and whether it is controlled or not and the type of the treatment used.
Bleeding disorder or anticoagulation Patients with haemophilia A or B should be given clotting factors replacement. *Patients on warfarine should be converted to heparin preoperatively*. Where patients are anicoagulated on account of previous thromboemoblic disease, additional prophylaxis's should be given, including measures such as compression stockings, intermittent compression boots while on the operating table and early mobilization where possible.

Any history of haematological diseases as thalasaemia ,autoimmune haemolytic anaemia ,etc.

Adrenal problems as Cushing disease or Addison's disease.

Previous history of jaundice, history of viral hepatitis.

Patients with obstructive jaundice often have prolonged prothrombin time and require vitamin K & or fresh frozen plasma prior to surgery to correct the abnormality. *They are also more prone to infection & poor wound healing*. Intraoperatively it is important to maintain a diuretics & fluid replacement to prevent acute renal failure & hepatorenal syndrome. In the presence of liver impairment, metabolism of some commonly used drugs may be reduced.

Past surgical history

Nature of previous operations. What has been done before? What problems were

encountered at that time?

Complications of previous operation

e.g. DVT, Methicillin resistant staphylococcus aureus or wound dehiscence.

Past anesthetic history

Difficult intubation (The patient may be told about this).
Aspiration during anaeshesia may suggest delayed gastric emptying (e.g. due to DM).
Scoline apnoea. Deficiency of pseudocholinesterase resulting in sustained paralysis following short acting muscle relaxing as suxamethonium. It is usually inherited as an autosomal dominant &so there may be family history.
Malignant hyperpyrexia. Rapid excessive rise in temperature with muscular rigidity often with rhabdomyloysis following induction of anaesthesia and carries a high mortality. It is inherited as autosomal dominant.

Social habits

Smoking: Ideally patients should stop smoking for the last 9 weeks before any general anesthesia to improve their respiratory function & reduce their thrombogenic potential.

Alcohol: History of dependency should be sought &management of the preoperative period using chlordiazepoxide to avoid acute alcohol withdrawal syndrome.

Substance abuse: In particular I.V. drug usage, should be sought and appropriate precautions taken. Such patients are at high risk for transmission of hepatitis B, hepatitis C & HIV.

Drugs

Most drugs should be continued on admission. In particular drugs acting on the cardiovascular system should usually continued and given on the day of surgery. The following drugs are of surgical concern

Warfarin: Where possible, should be stopped before surgery. If continued anticoagulation is required, then convert to heparin.

Aspirin causes increased bleeding time & should also be stopped where ever possible at least 10 days before surgery.

Steroids: Patients who are steroid dependent will need extra glucocorticoids in the form of intravenous hydrocortisone injections to help them overcome the perioperative stress.

Immunosuppressive drugs: The patients on such drugs more prone for post operative infection.

Diuretics. Both thiazide & loop diuretics cause hypokalaemia.

Monoamine oxidase inhibitor. They have important side effects e.g. hypotension when combined with general anaesthesia.

Oestrogen-containing contraceptive pills (EOCP) increase the risk of thromboembolic disease in women taking them prior to surgery.

Progesterone-only contraceptives appear to pose little or no additional risk and may be continued during surgery.

Allergies

Ask about allergy to * Anaesthetics * Antimicrobial drug * Skin preparation substances e.g. iodine * Wound dressings e.g. elastoblast.

Patient assessment for anesthesia

Anesthetists commonly measure the severity of the patient comorbidity, and assess the risk of anesthesia according to the *American Society Anesthesia (ASA) scale:*

- ASA I Healthy patient. The pathological process requiring surgery is localized, e.g. a fit young patient with an inguinal hernia.
- ASA II Mild to moderate systemic disease which may/may not be related to the pathological process requiring surgery,e.g. patient on medication for hypertension.
- ASA III Severe systemic disease limiting activity, e.g. a patient with angina on walking 200 yards.
- ASA IV Severe systemic disease posing a constant threat to life, e.g. a patient with angina at rest.
- ASA V A moribund patient unlikely to survive 24 hours with or without surgery, e.g. an elderly patient with septic shock from perforated diverticular disease

Routine preoperative testing

Complete blood cell count

Possibility of substantial blood loss, patients with chronic illnesses or symptoms of anemia.

Urinalysis

Urologic symptoms, instrumentation of the urinary tract, possibility of surgical placement of prosthetic materials

Serum electrolytes, creatinine, and blood urea nitrogen

Age >50, chronic diarrhea, renal disease, liver disease,DM, CHF or other cardiac disease, hypertension (HTN), major procedure, diuretic use, digoxin use, ACE inhibitor use

Coagulation studies

Family history of bleeding disorder, patient history of abnormal bleeding, anticoagulant usage, liver disease, malnutrition, chronic antibiotics

Biochemical profiles (including liver enzymes)

History of liver or biliary disease.

(*Albumin level is a strong predictor of perioperative morbidity and mortality, should be considered for major procedures*.)

Pregnancy testing

Any woman of childbearing age (except posthysterectomy patients)

Chest x-ray

Acute cardiac or pulmonary symptoms

Electrocardiogram

Men >40, women >50, history of cardiovascular disease or arrhythmia, diabetes, HTN

Type of blood/cross match and screen

None if very low risk of blood loss. Type and screen if risk of substantial blood loss is moderate to high.