

Postoperative care and complication

Although minor procedures usually cause little disturbance, most major operations impose nervous and physical stress which result in metabolic and chemical changes in the body tissue and fluids which includes :-

- 1-loss of blood and surface evaporation from exposed tissue during the operation reduce the volume of circulating fluid.
- 2-the volume urine excreted is at first reduced than a phase of diuresis follows 3-7 days after operation.
- 3-breakdown of tissue proteins results in increased excretion of urea, ammonia and acids.
- 4-Na⁺ and Cl⁻ are retained within the body because of increased adrenal cortical activity and decreased excretion by kidneys.
- 5-depletion of K⁺ content of tissue due to increased excretion of K⁺ by kidney for few days post operatively.

The body reaction to surgery become pathological when they are exaggerated, inhibited or modified by factors such as :-

- 1-excessive blood loss before or after surgery if not replaced immediately.
- 2-starvation before or after surgery.
- 3-over loading of patient with fluid and salt.
- 4-vomiting and diarrhea before and after surgery.
- 5-operation affecting renal and intestinal function.
- 6-depression of hemopoiesis by disease or drug.

PREOPERATIVE ASSESSMENT

Most women best admitted to hospital one day before operation, general assessment of health by clinical examination, vital signs, heart, lung.

Investigation : Hb , blood group , blood sugar ,GUE ,ECG ,CXR for heart & lungs , blood urea ,plasma electrolyte , proteins , LFT desirable before extensive procedures such as radical operation for malignant disease.

prophylactic anti-biotic :this is recommended when the expected incidence of infection is in excess of 10 % e.x : vaginal hysterectomy ,abdominal hysterectomy , pelvic abscess drainage, radical surgery for gynecological malignancy , poor socio- economic status & prolonged procedure for more than 2 hours.

First &second generation cephalosporines are the most commonly used along with metronidazole to cover both G +ve ,G-ve and anaerobic ,usually given for the first 24 hours.

Postoperative management :-

1-General :- which include :-

a-positioning :patient should be laid flat and on her side to reduce risk of inhalation of vomiting .

b-should be encouraged to move freely in bed .

c- Deep breathing & simple arm , leg & foot exercise .

d- Early ambulation to lower the incidence of thrombosis .

2- Analgesic & hypnotics e.x : morphine & pethedine .

3- Fluid replacement & diet : fluid requirement can be calculated by :-

a-body surface x 1000 to get fluid requirement in ml .

b-A 60 Kg patient needs 100 ml / hr for every additional Kg body weight 1 ml / hr is added as crystalloid solution , ringer's lactate is preferred to N/S .

Post operative complications

1-Shock :-

Defined as a severe circulatory disturbance which may progress to circulatory failure & death .

C/F : skin is pale , cyanosed ,dry or moist , raised pulse rate , decreased blood pressure , it is of two types :-

a-warm hypotension : pulse volume is good ,skin is warm & pink .

b-cold hypotension : cardiac out put is poor , pulse volume decreased , skin is pale & cold .

causes :-

- 1-Hypovolemia due to loss of blood ,fluid by diarrhea , vomiting .
- 2- Intravascular volume depletion .
- 3- Sepsis e.x : peritonitis .
- 4- Adrenal insufficiency.
- 5- Drug sensitivity .
- 6- Posture as prolonged lithotomy .
- 7- Cardiogenic e.x : MI , cardiomyopathy .
- 8-Extracardiac e.x : pulmonary embolism , constrictive pericarditis .

Treatment :-

- 1-Lay patient flat & elevates the feet of the bed .
- 2-Warm the body by blankets .
- 3-Oxygen administration .
- 4-blood transfusion .

5-Inotropic agents & vassopressors e.x : dopamine which produce vasodilatation to increase systemic perfusion.

6-I.V antibiotics .

7-Glucocorticoid especially in anaphylactic shock .

8-Morphine especially in cardiogenic shock .

2-Pyrexia:-

Types:-

a-reactionary: common in the first 48 hrs after operation ,it is slight or moderate caused by absorption of the products of tissue damage &BLOOD CLOTS ¬ required treatment .

b-pathological: more serious rises in temperature especially if associated with tachycardia, systemic or localizing symptoms .

causes:-

a-UTI

b-infection of abdominal wound .

c-peritonitis.

d-hematoma formation.

e-pulmonary embolism &RTI.

f-pelvic infection

Treatment : is planned according to the cause .

Pelvic infection :-

It is common after gynecological surgery e.x : abdominal & vaginal hysterectomy.

C/F : pyrexia , lower abdominal pain , purulent offensive vaginal discharge .

Preoperative pelvic infection can be restricted by appropriate preparation of the operating theatre , minimizing the time to perform surgery , minimizing the amount of tissue damaged or crushed & by using prophylactic antibiotic .

3-Postoperative vomiting :-

It is common after any operation & usually subsides within 12 – 24 hrs.

Causes :-

- 1-Anesthesia .
- 2-Operation & pain .
- 3-Drugs : e.x : morphine .

Treatment : highly selective 5- HT receptors antagonist e.x : ranitidine 50 mg I.V 8hrly .

4- Deep vein thrombosis :-

It complicates 3-5 % Of major operations .

Causes :-

- 1-Blood stasis due to obesity , immobility before , during & after surgery , impairment of the venous return during operation e.x : vaginal hysterectomy , circulatory failure e.x : shock , age more than 45 yrs & gross varicose veins .
- 2- Hospital life due to limitation of physical activity .
- 3-Dehydration due to vomiting , diarrhea & hemorrhage .
- 4- Anemia .

5-Injury to the vein walls by pressure & anoxia .

6-Blood changes : increase number of platelets & fibrinogen content .

7-Pregnancy characterized by alteration in blood clotting factors & slowing venous circulation .

8-Oestrogen & progesterone preparation e.x : contraception .

9-Advanced malignant disease , cachexia , anemia .

10-Constitutional .

C/F : first sign of DVT usually appears 7- 14 days after operation which include :- pain , tenderness & stiffness in the back of calf , low grade fever within 2-4 days of onset of pain , swelling of foot , ankle & sometime whole leg in severe case due to total occlusion of the vein at higher level .

Investigation :-

a-Ascending venography : it is the gold standard test , a radio opaque medium is injected to the dorsal vein of the foot & its movement up the veins studied by x – ray , persisting filling defect must be seen at least two films for diagnosis of thrombosis .

b-Duplex examination (Doppler & real time ultrasound) , it allows direct visualization of the clot in venous system .

c-Iodine - radio isotope labeled fibrinogen injected into the lower venous system studied by scanning .

d-MRI for venous clot demonstration .

Treatment :-

1-Prevention by : correction of anemia & blood loss , avoidance of pressure on the calf , early movement & ambulation , routine breathing & other exercise , patient with risk factors should receive heparin 5000 units subcutaneously two hrs preoperatively repeated every 12 hrs postoperatively for 5 -7 days

2- General treatment :-

As soon as thrombosis diagnosed patient should be laid flat , the foot of the bed raised to speed venous return from legs , walking desirable within 1- 3 day of treatment .

Anti coagulant should be started immediately heparin is the drug of choice in acute phase in a dose of 5000 units as bolus followed by I.V infusion at a rate of 1000 units / hr , monitoring by estimation of activated partial thromboplastin time to maintain it 1.5 – 2 me s the control . With this treatment all evidence of thrombosis usually disappear within 4-5 days , but should be connued for further 5 days during which time oral anticoagulant initiated e.x : warfarin sodium , it's action established within 12 -36 hrs & thus they require a supplement of heparin to cover first 1 – 2 days of treatment , it is controlled for at least 3 months .

3-Other treatment includes :-

a-Ligation of common iliac vein .

b-Removal of thrombus (thrombectomy) with or without ligation .

c-Thrombolysins e.x : streptokinase to deal with largest clot & massive thrombosis .

5-Pulmonary embolism :-

In 50 % of cases it is preceded or followed by clinical evidence of DVT .

Causes : as in DVT .

C /F : sudden violent chest pain , shock , severe dyspnea , tachy cardia , cough with blood stained sputum, cyanosis , coma & death from ventricular fibrillation or cardiac arrest .

Diagnosis :-

a-Arterial blood gas assessment revealed hypoxia due to hypoperfusion .

b-Ventilation perfusion lung scanning reveal decreased perfusion with area of adequate ventilation .

c-Other : arteriography , direct radiography , ECG which may reveal no abnormality .

Treatment :-

a-General: includes ; resuscitation , intratracheal O_2 , treatment of shock , cardiac massage , morphine , atropine , antispasmodic , digoxin i.vly .

b-Anticoagulant :- 20000 iu of heparin I . v ly for 7-10 days .

c-Embolectomy .

d-Thromboectomy .

6- Hemorrhage :-

-Types :-

1-Vaginal bleeding:-include:-

a-primary: which occur usually within 24hours after operation &is the result of failure to control one or more large vessels.

Treatment :- lapratomy & suturing the bleeding area.

b- secondary: usually occur between 6-14 days after operation &it is associated with separation of a slough due to infection .

treatment:- systemic antibiotic , elevation of foot of bed opiates if bleeding severe ,tight packing of vagina for 24-48 hours.

2- intra pelvic site:- Hg occurring after abdominal surgery is usually the result of a slipped ligature on the ovaries or uterine vessels, treatment :- laparatomy to secure bleeding points.

7-paralytic ileus:-

C/F: abdominal distension ,vomiting , -ve bowel sound, acidosis, dehydration ,increase Pulse rate , decrease Blood pressure shock & injury to intestine.

b-haemoperitoneum.

c-peritonitis.

d-swallowed air.

Treatment:-

a-analgesic& sedative to left bowel at rest.

b-continuous suction by N/G tube.

c-KCL supplementation to the i.v fluid infusion.

d- I.V fluid to correct

e- I.V antibiotic to treat underlying peritonitis

8-intestinal colic &distension:-

One of the most distressing features of any abdominal operation is the tendency of intestinal distension which usually occurs around 48hrs after operation & usually subside within 24hrs of their onset & with passage of flatus .more severe distension should be treated by :- a-analgesia& antispasmodics i.v every 4 -6 hrs .b-rectal sometimes simple enema.

9-intestinal obstruction :-

If intestinal function does not return to normal within a few days with attacks of colic & exaggerated peristaltic wave on auscultation this indicate mechanical intestinal obstruction on which adhesion can formed within 3-3days

of operation diagnosis :- x-ray abdomen erect & supine position.

Treatment:-

a-conservative measures e.x : i.v fluid ,null by mouth , continuous N/G suction.

b-if no response ,lapratomy is indicated.

10-perinoitis :- of 2types:-

a-general peritonitis : which manifest 2-3 days ae r surgery.

b-pelvic peritonitis : which is localized to the pelvis with abscess formation;

C/F: fever, tachy cardia , rectal pain on defecation , diarrhea,& abdominal colic .

O/E: tenderness & rebound tenderness in areas other than around the incision.

Treatment :- same as for illus , surgery is indicated in an abscess formation whether abdominal or pelvic.

REFERENCE :-

Jeffcoat,s text book of gynecology