Pre operative assessment and care

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Why should we do preop assessment ?

بدي أعرف هل المريض fit بدي أعمل أقل ال complication

1. Determine relevant tests & consultations needed for the patient .
2. Minimize post operative complications
3. Decrease peri operative mortality rate as one third is preventable
4. Reduce patient care costs

مثلاً مريض DM ودخلتو جراحة بدون ما أعرف وصار معه hypoglycemia

HOW ? by doing full exam.

1. Assessment of patient fitness
2. Assessment of operative risks
3. Explanation of the procedure
4. Prophylactic measures
5. General preparations
6. Estimated blood loss & needs…
7. ? Need for ICU.

Patient Assessment for fitness

ما تركن عزميلك .

الخاص فيه و ما يعتقد عهقوري سابقه لأنو ممكن يتطور معه DM أو HTN

- History ← كل طبيب لازم يأخذ الهستوري

  - Do not assume that the history has already been adequately covered previously. Important *points may have been overlooked* in a busy out-patient clinic……
  - ? Substantial *delay* between the clinic appointment and the *admission date*
  - Resp. disease, smoking, DVT, bleeding dis.

Recent MI ,drugs……? , social history

Patient Assessment cont…

Physical examination

1. Vital signs
2. Cardio-Respiratory systems
3. Mental status
4. Nutrition status

* الذم تهتم فالمريض وما تشوف حالك عليه :)

Important note

- *History and examination* performed by appropriately trained & competent personnel remains the *most efficient & accurate way* of initially detecting significant morbidity.

the most accurate to reach to diagnosis is listen to the patient.

* حتى للذم أعمل أي تحليل غير فقط / Urine ، Hb ، ~~[redacted]~~

young ، minor surgery healthy adult

3 —

Preop Investigations

- *Routine pre-op investigations are* **expensive** and of **? Value** ,The National Institute of Healthcare and Clinical Excellence (NICE) recommends the following pre-operative tests
- **Routine**

1. Hb,
2. UA (dipstick)

- CBC

1. If older than 60 y
2. Sever renal disease
3. *All major surgery*

Preop Investigations cont…

- U&E is required for

1. Patients > 60y or on diuretics
2. *All major surgery*

- ECG is required for

1. Patients > 60y,
2. Cardiac or renal disease

- CXR, not routinely done (patients scheduled for critical care)
- FBG and Hb a1c for patients with diabetes mellitus and endocrine problems

fast blood glucose

Preop Investigations cont…

- Clotting screen is required for

1. ? History suggestive of bleeding diathesis,
2. Liver disease,
3. Eclampsia, cholestasis
4. Family history of bleeding disorder,
5. Anticoagulant agents,

- Special ABGs, LFTs ,PFT, FEV_1 ,Preg. test ,C spine Xray → for patient have back operation
  مـ واحد عنده hernia أررج أعلو يأما.

حسب الحالة بطلب ال test.

American Society of Anesthesiologists (ASA) score

- Class I A normal healthy patient MR 0.1%
- Class II A patient with mild systemic disease that does not limit functional activity MR 0.2%
- Class III A patient with severe systemic disease that limits functional activity e.g. COPD MR 1.8%
- Class IV A patient with severe systemic disease that poses a constant threat to life MR 7.8%
- Class V A moribund patient who is not expected to survive for longer than 24 h, either with or without surgery MR 9.4%

Patient Assessment for fitness cont…

- Fitness to GA. [ASA]

للتدم أتيم لهذا المريض
هيستفيد من العملية ولا لأ.

- Fitness to surgery (Patient fitness scale)
- Assessment clinics

Assessment of op. risks

- Patient selection and benefit versus risks
- Early decision
- Best treatment for particular patient

ما يجمع علاج؟ عاقل.

Problems of surgery in the obese

Increased risk of:

- Respiratory compromise
- Difficult intubation & Aspiration
- Myocardial infarction (five times)
- Cerebro-vascular accident
- Deep vein thrombosis & pulmonary embolism
- Poor wound healing/infection (two times)
- Mechanical problems – lifting, transferring, operating table weight limits

Preparation of diabetic patients

- Minor surgery *in the NID diabetics*

1. Omit their morning dose of medication
2. **Early surgery**
3. Restarting treatment when they start eating

- **More significant surgery** & in the ID diabetics

1. An intravenous insulin infusion will be required.
2. This should be started when the patient first omits a meal and continued until they have recovered
3. Serum potassium level must be closely monitored.

Surgical risks for the diabetic patient

- Increased risk of sepsis , local & general
- Neuropathic complications
- Vascular complications , cardiovascular, cerebrovascular & peripheral
- Renal complications
- Fluid and electrolyte disturbances

Cardiovascular disease

1. Hypertension

- Patients with systolic pressures of 160 mmHg or above and diastolic pressures of 95 mmHg or above should have elective surgery deferred until their blood pressure is under control. هي الشرط
- Newly diagnosed hypertension may need further investigation

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Cardiovascular disease cont…

2. Ischemic heart disease → suspectible to anesthesia أكثر لـ arrythmia

- Recent myocardial infarction is a strong contraindication to GA → general anesthesia
- Significant or worsening angina needs investigation by a cardiologist before elective surgery.

* صنوي أعطي دم غير قبل 24 سـ من العملية وصنوي أعطيه فالليل
↳ because shortness of staff.
لو صار مضاعفات مش حد يعالجهم

Cardiovascular disease cont…

3. Dysrhythmias

- AF
- Heart block
- Pacemaker Type ? programming

bipolar diathermy

4. Prosthetic or leaking cardiac valves

- Prophylaxis …

* Give pack RBC
مش دم كامل عشان
ما يصير volume
overload
وسخن الدم قبل
ما تعطي للعيان

Preop anemia & blood transfusion

- Consider transfusion if hemoglobin level is less than 8 g / dl ,
- Blood is given a day before the operation
- Consider carefully which products to use
- Order & write up blood products clearly
- Give the blood at a sensible time of day
- Give each blood unit over 4hrs period
- Consider co-administration of a loop diuretic
- Be prepared to treat any reactions rapidly

عشان نقلل volume او overload

Respiratory disease

1.Infection

- Significant lower respiratory tract infections should be treated before surgery
- Viral infections

2. Bronchial asthma

- Inhalers should be continue ,
- D/ W anesthetist

4. Bronchiectasis & COPD

Respiratory disease cont…

- **Smoking** has the following effects:

1. Depress immune system
2. Weak - ve inotropic action on the heart
3. Forms cacboxyhemoglobin….
4. Nicotine ↑ heart rate & BP
5. Depress cilia action, pulm. macrophages

- Should be stopped 6-8 weeks , effects of nicotine & carboxy HB takes 12-24 hrs

محدش بقدر عليها.

↓ shift of association curve to the left.

Prophylactic measures

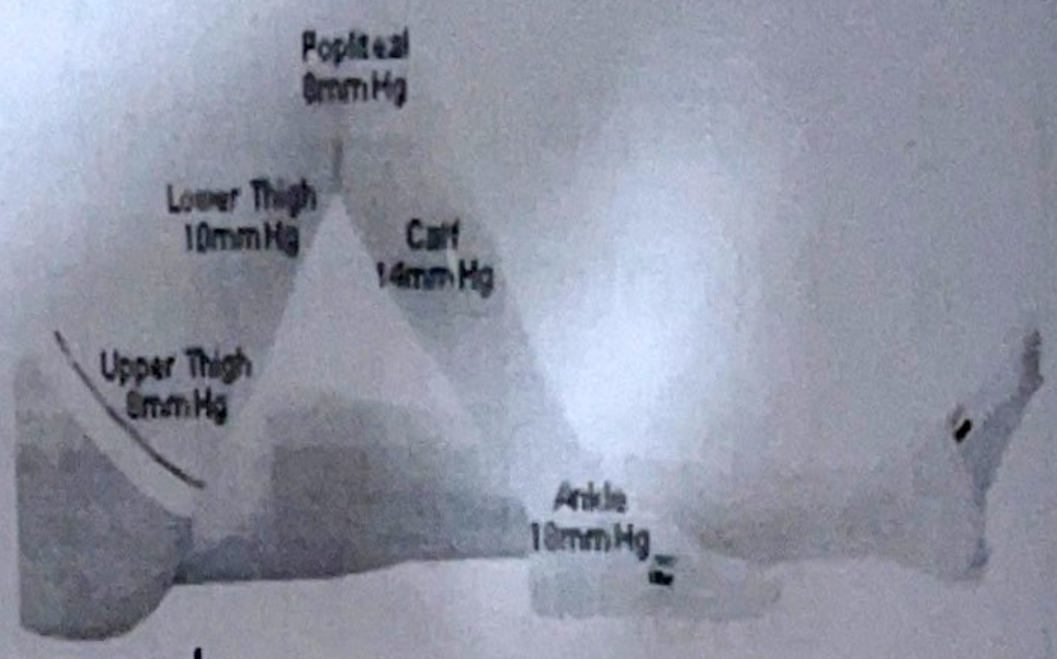
1. Prevention of endocarditis
2. Prevention of renal failure
3. DVT prophylaxis → enter umbrella to prevent emboli reach lung.
4. Prophylactic antibiotics
5. Peripheral neuropathies will require prolonged ventillation

DVT Prophylaxis

Risk groups

- **LOW RISK** ***Risk is less than1%***

1. Age less than 40
2. Minor op.
3. Less than 30 min
4. No immobilization



Recommendations

1. TEDs
   Thrombo Embolic Deterrent
2. Early ambulation

لازم يتحرك نحرب فرصة

- **MODERATE RISK** ***Risk is 2-8%***

1. Age more than 40, obesity, VV
2. Thoracic or abdominal op
3. More than 30 min

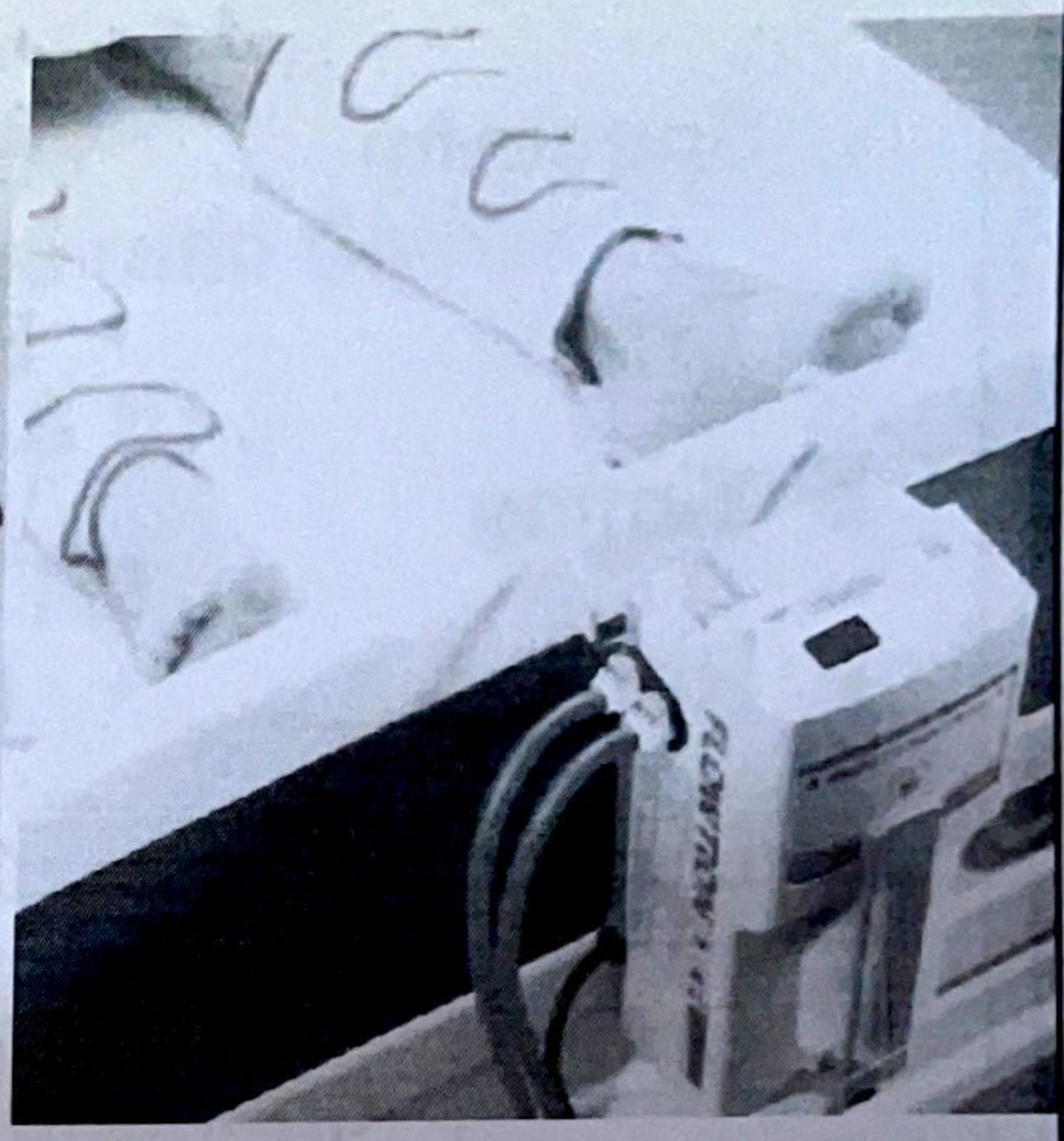
Recommendations

* TED's → first

1. EPC
2. Low dose heparin **OR**
3. Low molecular wt. heparin
4. Early ambulation

EPC

جهاز بنفخ الدم فالرجل _ عشان مايصير stasis



- **HIGH RISK** ***Risk 6-12%***

ي especially patient in hip replacement

1. Recent DVT /PE, or +ve Hx
2. Major abdo. , orthopedic or pelvic op.
3. Malignancy
4. LL paralysis/ amputation

Recommendations

1. GCS
2. Early ambulation
3. Low dose heparin even IV heparin OR
4. Low molecular Wt. heparin

PROPHYLACTIC ANTIBIOTICS

كان سؤال امتحان .

- Spectrum — Broad -> Cephalosporin.
- Type — Bactericidal
- Timing — With induction of anesthesia
- Root — IV
- Duration — 24 - 48 hrs
- Choice — Type of operation

حسب المنطقة لو GI ممكن بعطي metronidazole + ceftriaxone

ملوش لازمة حا بطلب بعد العملية لو اذا نيت

Example : Jaundiced patient

- Iv fluids بدي أشوف الكبد liver شغال ولا fail
- International normalized ratio (INR) = 1
- Urea & Electrolytes (U & E) ,
- Liver function tests (LFTs)
- Diuretics
- Antibiotics
- ? Preoperative biliary drainage

Check Drug therapy

- Antihypertensive drugs ما بوقفهم حتى لما يجي أعمل العملية
- Steroids ? Duration of treatment → if less than 2 weeks No tabbering
- Aspirin → بوقفو قبل أسبوع ← tabbering لا بتابع فترة
- MAOI → بكلم الـ psychiatrist يغيره البدا.
- Oral anti coagulants
- Oral contraceptives → cause DVT → estrogen contraceptive only. وبوقفها قبل
- Oral hypoglycemics

hyperpyretic بعد coma ← dangerous.

Preparation

- **General Measures**

1. Good nursing care (N)
2. Patient identification (N)
3. Marking of operative site لازم يتعلم المكان د (D)
4. Proper administration of drugs قبل عشان ما يتعيد المكان الغلط. (N)
5. Explanation of procedure & reassurance (D)

General preparations

- Nursing procedures
- GI preparation → 6h before surgery No Eat
- Catheterization
- Consent
- Pre medications

Nursing procedures

- Shaving
- Check chart
- Shower
- Gowning
- Patient identification

GIT preparation

Fasting To decrease regurgitation risk

1. No solids for 6 hours' and '
2. No clear fluids for 4 hours' before surgery

- NG (Ryle) tube
- Specific anaesthetic techniques
- ? H2-receptor blockade,
- Bowel preparation
- Rectal washout

7/9/2022

Catheterization

- **Indications**

1. Long operations
2. Pelvic operations
3. Trauma & critical patients
4. Patients with risk of renal failure

- Technique

Estimated blood loss & needs

- Blood loss during surgery up to 1.5 L will result in mod. tachycardia / drop of BP
- Blood loss > 500ml should be replaced
- Measurement of blood loss by swab weighing

  One Gm wt. = One ml loss of blood
- Anticipate blood loss & needs according to the operation , patient Hb ….

  Group & hold or cross match

Informed Consent

طبيب القسم بجلبها.

- Why ?
- Who will do it ?
- When ?
- Details of procedure & ? complications

Preoperative medications

↳ anxiolytic (Benzodiazepan, Buspirone)

- Who will prescribe it ?

طبيب التخدير بعطيها

- Who will give it ?
- When ?
- Type

Counseling

- *Preoperative counseling with a specialist nurse will* lessen the psychological impact of some types of surgery e.g.
  1. Limb amputation surgery
  2. Stoma formation.

بفرصة لو هو الحياة مش هتوقف بعد القطع

SUMMERY OF CHECK LIST BEFORE THE OPERATION

- Consent
- Preop. medication
- Bladder emptying
- Recent meal
- Op. Team & anesthetist
- IVs & blood
- NG tube
- ? Notify the chief