Sheet no. 9

Refer to slide no. 9

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PREOPERATIVE EVALUATION

**You have to return to the slides**

**The doctor present 3 cases in the beginning of the lecture, those will be discussed later on.**

Slide #12:

By taking good history and making good physical examination; you don’t have to do further investigations in 85% of the cases.

PMH: past medical history

PSH: past surgical history

Slide #19:

LVH: left ventricular hypertrophy

LBBB: left bundle branch block

a fib: atrial fibrillation

Slide #23:

KFT: kidney function test

LFT: Liver function test

Slide #25:

\*Advice: don’t be rigid with numbers, so when a 43years old male came to you, you have to do an ECG for him, even if books says he’s have to be 45 years old.

In “high risk” surgeries (ex, liver transplantation), you have to do all kinds of tests even if the patient is young and medically fit, because there’s many dangerous complications you may face during and after the surgery, also you have to make a baseline for this patient to make follow up easier.

Slide #26:

Coagulation studies: INR, Pt and Ptt.

 \*these tests aren’t routinely used, but as we said before it becomes mandatory tests in case of ‘’high risk’’ surgery, for example, if a patient will go for valvular heart replacement, you have to do all of these tests, if Urinalysis is positive, you have to postponed the surgery, cause there’s risk of infection and you will put a prosthesis.

Slide #27:

Drug-eluting coronary stent implantation is more frequently used than bare-metal coronary stent implantation.

Patients with stents usually use dual antiplatelets therapy (Aspirin+Plavix), so they have high risk for bleeding, and you can’t stop the Plavix for 12 after putting the stent, otherwise the stent will be closed.

 Slide #28:

If you have to stop aspirin before a surgery, you have to stop it 7-10 days before the surgery, because aspirin has irreversible effect on platelets, and it takes 7-10 days to regenerate new platelets in the body.

Slide #29:

If the patient using warfarin (anticoagulant), you have to check his INR, it should be below the therapeutic level of that specific patient (therapeutic level for valvar hear disease is between 2-3 ,you stop warfarin before 3-5 days of the procedure and once the INR reachs below 2 you can start bridging with heparin ), Heparin is an anticoagulant which we can stop it 4h before our surgery, it has a short half life.

Slide #30:

Metformin: it’s an antidiabetic agent but not an oral hypoglycemic agent, it will not cause hypoglycemia (like insulin) but it prevents hyperglycemia, it affects the absorption of the glucose by the blood, metformin could cause renal impairment, so you have to make sure that the patient in a good perfusion status and resume adequate amount of fluids.

Slide #32:

NPO: nil per os (nothing by the mouth)

We prevent our patient from taking anything orally before the surgery; it depends on his/her age:

* Neonates: 2h before the surgery
* Childs: 4h before the surgery
* Adults: 6h before the surgery

But if he’s a diabetic patient, we put him in NPO status before more than 6h of the surgery, because there’s a gastric delay in these patients.

There’s 3 criteria’s to determine the sequence of admission for the patients (who enter the operating room first):

* Age: we start with neonates then Childs then elderly patients then adults
* Comorbidities: patient with chronic illness (like diabetes mellitus) has the priority, because they can’t fast for a long period of time.
* Antibiotics: we start with clean surgeries then clean contaminated then contaminated then dirty surgeries.

**Clean surgery**: it’s almost an elective surgery with less than 2% risk of surgical site infection (so we don’t give prophylactic antibiotics), in these surgeries we don’t enter GI, GU, biliary or respiratory tract, surgeries on thyroid, lipoma and hernia are examples of clean surgery.

 In this type of surgeries we give prophylactic if:

* High risk patients (immune-compromised patients)
* If we will put a prosthesis like a valve or a mesh for a patient with inguinal hernia for example
* Bone surgery (without open wounds), to prevent osteomyelitis

\*prophylactic antibiotic: it means antibiotic in the operative area within 24h from the surgery; usually we use a single dose within 1h of the skin incision.

 **Clean-contaminated surgery**: here we enter the GI or GU or the respiratory tract, it could be an emergency (any minor breakdown of sterility is considered as clean contaminated as in cystectomy because of the minor slippage of bile during surgery ) and appendectomy (it’s at least clean contaminated (if the appendix is normal or slightly inflamed), but if there’s a pus, it becomes a dirty surgery).

**Contaminated surgery**: risk of contamination reaches 15%, there’s major breakdown of sterility and it’s unprepared.

**Dirty surgery**: like : frank pus, feculent peritonitis ( stool in the abdomen outside the GI tract ), perforated diverticulitis… up to 40% risk of contamination.

We give prophylactic antibiotics for clean-contaminated surgeries and clean surgeries (in special cases); we give therapeutic dose in contaminated and dirty surgeries.

Case 1 (slides 34+35):

* The age of any patient is really important, it’s an indication for ECG test and many other tests
* Inguinal hernia repair isn’t a major surgery
* No specific medical problems
* He’s not an alcoholic, he’s a social alcoholic
* He will get **10Met**, because he does construction work, and this information is an indication **not to do an ECG for him.**

 \*the doctor said never ever be rigid with age, if 50 years old man running every morning, he will not do ECG for him.

Case 2 (slides 36-38):

* Right total knee replacement isn’t a major surgery
* Hysterectomy: removal of uterus
* Glascow scale: it’s a subjective evaluation of level of consciousness, it’s repeatable, easy and free, it depends on 3 criteria (motor activity, eye movement, verbal response), if someone is bedridden and can’t move at all, but he could move his head and eyes he will get full mark in this scale (15), in our case, the patient has limitation in her movement but she will score 15 in glascow scale, because she was able to climb 2 flight of stairs within the past several months.
* This patient has minor (non-ischemic) changes in the ECG, it’s not an atrial fibrillation or major arterial arrhythmia, and ECG within 3 months is acceptable, so we’ll not do an ECG for this patient
* We’ll do an electrolytes and creatinine tests, because she’s diabetic and hypertensive, we **could add CBC** too.

Case 3 (slides 39+40):

* We have to evaluate bleeding tendency for this patient, he has history with hepatitis C without follow up
* You have to add ECG to the answer, he’s 58 years old

Someone asked why we don’t use electrolytes test?

This test is to measure levels of the main elements in our body (Na, K, Ca, etc), if there any problem in these elements, there’s always a major problem in our body (especially the kidney), or symptoms like diarrhea and vomiting, our body is keeping levels of these elements in normal range with a very strict mechanism, so whenever you have an abnormal reading for K or Na without symptoms, you have to repeat the test.

THANK YOU