

ESA Exam 2012, Eilat

A)

- 1) Causes of pulm. Edema:
backward failure, hydrostatic, cap. Leak, neg. pressure and so on, high altitude
- 2) noradrenalin – which receptors?, compared to pure alpha agonist, why rather NA than dopamine in sepsis
- 3) tracts of the spinal cord: descending, ascending: crossings?, Brown-Sequard Syndrome
- 4) heat loss during anaesthesia: type of heat loss, how much heat is lost by radiation, convection, ...; prevention of heat loss

B)

- 5) Propofol bolus of 200mg in 70kg pt. - pharmacokinetics: which variables to calculate Plasma concentration?, how can you achieve propofol plasma levels in a narrow range for anesthesia? 3 compartment model, TCI
- 6) Blood flow in organs: how does it work?, autoregulation: how does it work: kidneys, brain
- 7) SpO₂: how does it work (basic principle), what does it measure?, what is oxygen content?, what else do you need to know to calculate oxygen content (pAO₂ for physical dissolved oxygen), does it always work correctly? False measurements
- 8) cerebral blood flow

C)

- 9) 27 yr old female, previously fit and well, weakness over last 2 weeks, loss of appetite, sweaty, mild abdominal tenderness, WBC 17G/l, HR 150 SR, BP 95/63mmHg, BUN 20mg/dl, S-Crea 1,79μg/dl, PaCO₂ 21 mmHg, PaO₂ 104 mmHg, pH 7,01; surgeon: acute appendicitis -> theatre; differential – what do you think?, management; when asking for further lab tests: Serum Glucose is 400 mg/dl -> diabetic keto acidosis -> ICU management
- 10) acute renal failure in ICU: causes; renal replacement therapy: indications, hemodialysis: intermittent vs continuous; peritoneal dialysis in children
- 11) induction of anaesthesia: patient has urticaria and bronchospasm: most likely diagnosis – treatment; anaphylactic vs anaphylactoid reaction
- 12) CXR: complete shadowing of left lung field: DD; the x-rays were displayed on a computer screen, which seemed different to previous examinations.
- 13) discharge criteria from the recovery room at your institution

D)

- 14) 63 yr male 178cm, 103kg: hx of perforated diverticulitis and right hemicolectomy 5 wks ago; postoperative development of Sepsis and heart failure requiring ventilation and ICU for 2 weeks. Now the patient has a pressure sore on his right buttock and is scheduled for debridement and flap surgery in prone position with expected duration of 3hrs; how would you evaluate the cardiac fitness and anaesthetise the patient; what was the reason for his cardiac decompensation
- 15) pulmonary hypertension: definitions, primary vs secondary; eisenmenger reaction; treatment options – they were very keen on hearing sildenafil (what is this, how does it work...) - difference in treatment of prim. vs sec. pulmonary hypertension
- 16) ECG: SR, bigeminus, grade one AV block
- 17) regional block of lower extremity: femoral nerve block; landmarks; what would you do without an ultrasound; nerve stimulator (mA, time, how do you use it,...)

General thoughts:

If you are asked something you really do not have much clue about then say it. Otherwise the examiner will keep on asking in order to find the little bit of hidden knowledge might have – but

you will lose time on other questions where you might have scored easily!

If you mention a specific drug it is very likely to be asked about how this drug works.

If you seem very knowledgeable on one topic they may quickly move on to another one.

If you know the key answers to a certain questions but lack some bits and pieces regarding the details: try to structure your answer (a pause up to 4 seconds is appropriate) and talk slowly and hope for the gong...

Summary: a very busy and stressful day; there were plenty of refreshments offered; the lunch was nice as well but my appetite was lacking... at each table sat an examiner from israel and one from another european country (austria, england, germany, romania). The examiners acted all in a professional and correct manner. Sometimes they tried giving slight hints which did not always turn out in the candidates favor. At the end of the day only 4 of 12 candidates passed.

Good luck!