HLS Midterm 2015

Histology

1- True about blood-thymus barrier – antigens that cross is cause immunological tolerance

2- Wrong about lymph nodes – a heel diabetic ulcer primarily causes enlargement of the vertical group of the superficial inguinal lymph nodes

3- Wrong about neutrophilia – exercise causes neutrophilia that persists for days

4- Wrong about granulopoiesis – peripheral blood count of neutrophils is an absolute measure of their total count

5- Wrong about second exposure to pathogen in the lymph node – B-memory cells are the first cells to react

6- Wrong combination – chronic renal failure – iron deficiency anemia (mostly)

7- Wrong about the spleen – like HEC of the lymph node, marginal sinuses only allow lymphocytes to go to the spleen

8- Wrong about WBCs – eosinophils are more phagocytic and bactericidal than neutrophils

9- Wrong about WBCs – in chronic meylogenous leukemia you see high blood count of meyloblasts

10- Wrong about lymphocytes – naïve B-cells recirculate tot the sites of inflammation

Physiology

11- Wrong about a 40-year old woman with: 110 g/L Hb, 3x10^12/L RBCs and a mean cell diameter of 8.2 microns – Most likely is IDA

12- Wrong about eosinophils – with basophils form 10% of WBCs (maybe)

13- Wrong match about clotting – factor XIII is for the intrinsic pathway

14- Least important clotting factor – XII

15- Not activated by thrombin – IX

16- Wrong about von Wilibrand disease – VIII:C is normal

17- Wrong about electrolytes – participate in the fluid movement between tissues and capillaries (mostly)

18- Wrong about lymph – fluids filtered are usually less than reabsorbed

19- Knowing Hb and cell count – you can find the MCH

20- A tissue that has no lymphatic capillaries – CNS

21- Wrong about Iron – is mostly absorbed in the jejunum (maybe)

22- Wrong about B12 – its deficiency mostly affects WBCs

23- True about Hb – its saturation curve is independent of Hb concentration

24- Wrong about albumin – transports CO_2

Pathology

25- Wrong about PNH – splenomegaly

26- No low reticulocyte – chronic blood loss

27- Similar mode of inheritance to HBH disease – sickle cell trait

28- Doesn’t worsen sickle cell disease – malarial infection

29- Not a color change in anemia – green

30- Wrong combination – hereditary spherocytosis-mutation of horizontal membrane proteins

Microbiology

31- Doesn’t cause sepsis – polysaccharides
32- Wrong about P. falciparum – only has shizogony in the erythrocytes
33- Wrong about P. malariae – relapse
Biochemistry
34- A patient with chronic moderate anemia with high 2.3-BPG and low ATP – pyruvate kinase deficiency
35- Wrong about hemeproteins – Mb has lower p50 than HbA but higher than HbF
36- Lead poisoning affects an enzyme of heme synthesis that might be producing – porphobilinogen
37- Wrong about bilirubin – produced for heme by heme oxygenase system
38- Doesn’t cause a hemoglobinpathy – increasing the tendency of iron to stay in the ferrous form
39- Doesn’t happen in the RBC – heme synthesis
40- Wrong about iron – transferrin is for serum transport and storage of iron
41- True about Hb – β4 Hb has more sigmoidal saturation curve and thus more p50 (maybe)
42- Wrong about Mb and Hb – both are affected by 2.3-BPG
43- Wrong about G6PD deficiency – GSH is normally maintained in the reduced form by GSH-peroxidase
44- True about R and T forms of Hb – R releases protons
45- Wrong about the structure of heme – iron is coplanar with the heme in Hb in the deoxy form