Midterm Corrections (HLS)

Histology

Sheet 4:

Page 2: the last word in the box at the top should be “resorption”

Pages 6,7: Types of immunoglobulins produced by B lymphocytes are IgM and IgD NOT IgE And in class switching it can produce other types like IgE.

page 9, line 11 : MHC 1 is found in all the nucleated cells, and is NOT found in non nucleated cells (like RBCs).

Sheet 5:

Maturing T cells in the thymus, should not recognize foreign antigen and self-antigen (they only recognize self-antigen that are presented by reticular cells; MHC I and MHC II).

Page 5

Line 11 (the main site of Antibody production)

Line 18 increasing width of the Paracortex.

Sheet 6:

It should be anterior group of lymph nodes not the lateral, because the anterior group drains the lateral quadrants of the breast.

Page 9: About the palatine tonsils, its STRATIFIED squamous epithelium not striated.

Same page the clinical case, the white material isn't really pus, its calcified material (tonsil stones), the doctor said in the recording it's calcified hardened material.

Page 14: Last paragraph (lower half of the anal canal NOT lower 1/3).

Dr.faraj mentioned that (testis follow para-aortic lymph nodes -abdominal lymph nodes)

Page 17... In breast cancer that affect the lateral or outer half of the breast 》》 the anterior group of lymph nodes will be enlarged NOT the lateral

when the tonsil is strawberry-like >> the white material that fill the crypts is PUS in acute tonsillitis. however in chronic tonsillitis (rare) calcification may occur , In Adenoid (اللحمية) , the signs are :

-difficulty in breathe and mouth breath

-the incisors bulge out because of the continuos opening of the mouth.

Physiology

Sheet 1:

Page2...The table:

Leukocytes 7*10^9

Monocyte 0.4 *10^9 (2-10) %

Lymphocyte 1.5 * 10^9 (20-45%)

Platelets 250 * 10^9

Last line (5*10^6)

Sheet 2:

Page 7

Shorter life span not half-life.

Sheet 4:

Page 4

It's "oxygen content" instead of "hemoglobin content".

Sheet 5:

"Hemoglobin may reach up to 20 Gram/100 ml blood"

Not mg.

Page 7 :2.shape of erythrocyte: Macrocytic cells will settle faster than microcytic cells.

Biochem

Sheet 1:

Page 5 first line

It says: "The ALPHA helical segments are labeled from A to H (8 helical segments)"

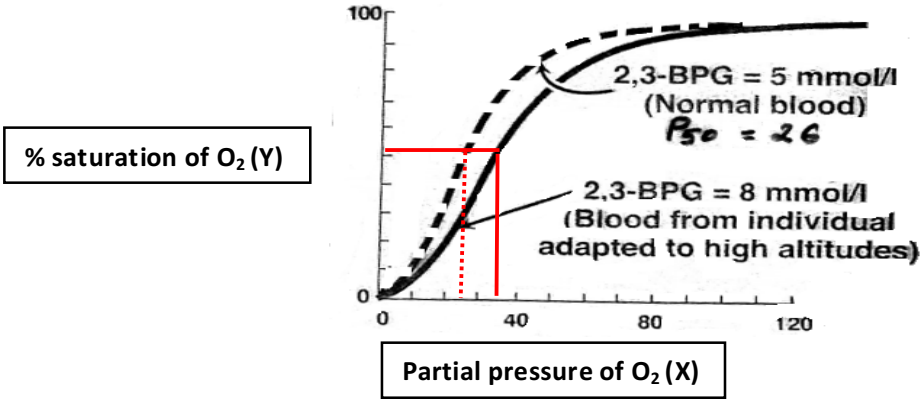
It should be the BETA helical segments.

Sheet 3:

Page 1: it's COPD (chronic obstructive pulmonary disease) not COMP.

There were 2 figures describing the activity of BPG as a negative effector on binding of oxygen to hemoglobin. They were really confusing, so I asked the doctor about them today. I'm sorry to say that the second figure might be wrong because it doesn't describe the effect under hypoxia.

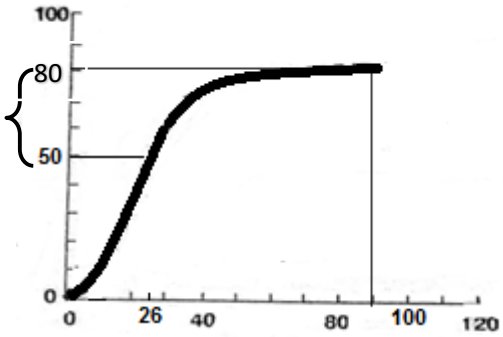
- The steepest area in the curve is the area affected by the allosteric activators/inhibitors, so any increase or decrease in oxygen will affect this area.



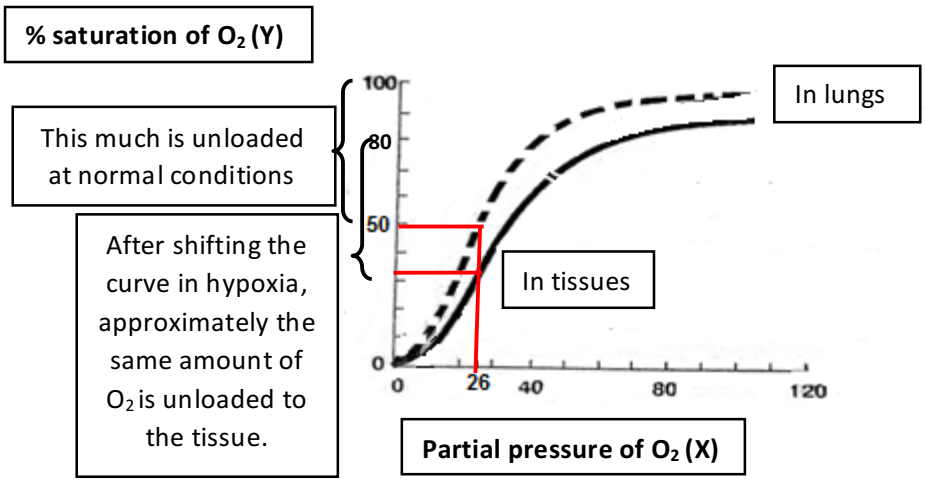
Oxygen-dissociation curve for Hb when **a negative** allosteric effector is added (BPG in this example).

When BPG is released, the curve has a p50 of about 26 mmHg. However, when BPG is added, the curve is shifted to the right. This shift means higher p50 and lower affinity to O_2.

This shift is useful under the effect of hypoxia, to understand this please refer to the following figures:

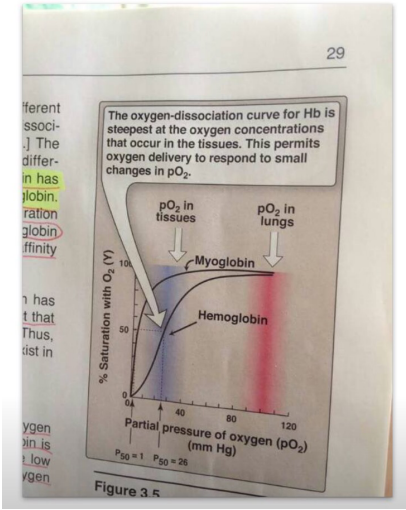


In hypoxic conditions (Pulmonary diseases, anemia..), hemoglobin is not going to be fully saturated but about 80% saturated. So the amount of O_2 unloaded to the tissue will be less than needed (around 30% in the figure).



However, this doesn't occur in our body because BPG will increase in such conditions & will shift the curve to the right. Shifting the curve to the right means less affinity of Hb to bind to O_2 (releasing more amount of O_2 to the tissue). <u>So the amount unloaded will be the same as in normal situations.</u>

The steepest area should be edited in figure 1 in the original sheet..



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The oxygen-dissociation curve for Hb is steepest at the oxygen concentrations that occur in the tissues. This permits oxygen delivery to respond to small changes in pO_2.

Figure 3.5

Sorry for this confusion!

Wish you best of luck.