

Anatomy study notes Blood 2 midterm prep

Hemostatic Disorders

1. Thrombus= Clot that develops and persists in an unbroken blood vessel.
2. Embolus= Free floating thrombus
3. Warfarin= used for those prone to atrial fibrillation where blood pools in the heart. Inhibits vitamin K function.
4. Atrial fibrillation= Irregular heartbeat that causes clotting.
5. Vitamin K = Is needed from clotting factor and prevents bleeding absorbed from fats.
6. Thrombocytopenia= Not enough platelets
7. Petechiae= red spots from bleeding on skin
8. Hemorrhage= Escape of blood from blood vessel where bleeding has occurred.
9. Hepatitis= Inflammatory condition of the liver.
10. Cirrhosis= liver disease.
11. Hemophilia= Hereditary bleeding disorders caused by a lack of clotting factors.

Blood Transfusions

Treating thrombocytopenia(lack of platelets)

- 1.Packed with red cells= Blood with platelets are removed.

Human Blood Groups

1. RBC s have glycoprotein antigens.
2. If the **blood** cells clump (**agglutinate**), the antibody has bound to the appropriate antigen on the cells. Your **blood** type matches whatever antibody **caused agglutination**: e.g. if your **blood** agglutinates in anti-B, you have the B antigen and are Type B. **Blood** types are indicated by both the ABO and Rh antigens present.
3. Antibody= Blood protein produced to combat a specific antigen.
4. Agglutinogens= They are simply antigens they produce agglutinins.
5. Agglutinins are the proteins (antibodies).

6. RhoGam= Help preventing RH- mother from becoming sensitized.
7. A transfusion reaction takes place when there is a mismatched blood infusion .
8. Ruptured Rbc that releases free hemoglobin into the bloodstream.
9. Diminished oxygen carrying capacity.
10. Clogged cells that impede blood flow.
11. Circulating hemoglobin participates in the kidneys and causes renal failure.
12. During birth, a leakage of the baby's red blood cells often occurs into the mother's circulation. If the baby is Rh positive (inheriting the trait from its father) and the mother is Rh negative, these red cells will cause the mother to manufacture antibodies against the Rh antigen. The antibodies (IgG class) do not cause problems for that first born, but can cross the placenta and attack the red cells of a subsequent Rh+ fetus. The red cells are destroyed, leading to anemia and jaundice. The disease - erythroblastosis fetalis or hemolytic disease of the newborn- may result in fetal death.
13. Agglutinogens= are the antigens
14. Agglutinins= They are the antibodies.
15. Agglutination leads to a positive reaction however this does not lead to a successful blood transfusion. For example if take an agglutigen of B mix it with an Agglutinin of Anti B they will agglutinate which means you are not supposed to transfuse them together.
16. Intrinsic vs Extrinsic pathway they form prothrombin activator that forms thrombin that forms fibrinogen that forms fibrin monomers using calcium ions they change that fibrin polymers which forms the clot.

- Thrombin catalyzes the polymerization of fibrinogen into fibrin
- Insoluble fibrin strands form the structural basis of a clot
- Fibrin causes plasma to become a gel-like trap
- Thrombin in the presence of calcium ions activates factor XIII that:
 - Cross-links fibrin
 - Strengthens and stabilizes the clot

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