

## CLOTTING FACTORS

Factor I	-	Fibrinogen
Factor II	-	Prothrombin
Factor III	-	Thromboplastin
Factor IV	-	Calcium
Factor V	-	Labile Factor
Factor VII	-	Stable Factor
Factor VIII	-	Antihemophilic Factor A
Factor IX	-	Christmas Factor
Factor X	-	Stuart Power Factor
Factor XI	-	Plasma Thromboplastin Antecedent
Factor XII	-	Hagman Factor
Factor XIII	-	Fibrin Stabilizing Factor

## Hemolytic-Uremic Syndrome

Renal Failure

Anemia (microangiopathic, hemolytic)

Thrombocytopenia

Encephalopathy (TTP)

## Henoch-Schonlein Purpura

Palpable purpura

Pressure (Blanches on pressure)

Pruritus

Pain in abdomen and joints

Positive Guaiac sign in stool

Proteinuria

Prednisolone given in treatment

Platelet count may be high or normal

## CD4 Marker

T-cell CD Marker – T for Tiny numbers

CD 1, CD 2, CD 3, CD 4, CD 5, CD 6, CD 7, CD 8

B-cell CD Marker – B for Big numbers

CD 19, CD 20, CD 21, CD 23

Myelomonocytic CD Marker – M for Middle numbers

CD 11, CD 13, CD 14, CD 15

## SEROUS FLUID

**TRANSUDATES** – results from **MECHANICAL PROCESS**

↓ Plasma oncotic pressure; ↑ hydrostatic pressure

**EXUDATES** – result of an **INFLAMMATORY PROCESS**

↓ lymphatic resorption; ↑ capillary permeability

	Transudates	Exudates
<b>FLUID: SERUM CHON</b>	<0.5	>0.5
<b>FLUID: SERUM LD</b>	<0.6	>0.6

### 1. PLEURAL FLUID < 10ml

- Thoracentesis; clear pale yellow
  - \*bloody
  - a. Hemothorax: Hct is the same as whole blood
  - b. Hemorrhagic exudate: Hct is lower
    - \*milky
    - a. Chylous: thoracic duct leakage [extracted with ether and stained by SUDAN III]
    - b. Pseudochylous: chronic infection condition

### 2. PERICARDIAL FLUID 10 – 50ml

- Pericardiocentesis

### 3. PERITONEAL FLUID < 100ml

- Paracentesis; ascites
  - a. PSAMMOMA BODIES – concentric striations; ovarian and thyroid malignancies

	T	E
<b>SERUM-ASCITES ALBUMIN GRADIENT</b>	>1.1	<1.1

## FIBRINOLYSIS

	1 <sup>o</sup>	2 <sup>o</sup>
<b>Platelet count</b>	Normal	decreased
<b>Red cell morph.</b>	Normal	RBC fragments (schizocytes)
<b>PT &amp; APTT</b>	Abnormal	Abnormal
<b>Protamine Sulfate</b>	Negative	Positive
<b>FDP</b>	Positive	Positive
<b>Euglobulin Lysis</b>	Positive	Negative
<b>D-dimer</b>	Negative	Positive

## TEST USING AGGLUTINATION / AGG. INHIBITION

Test	Reactant Detected	Insoluble particle	Type of Technique
COLD AGGLUTININ (PAP)	Ab	Human group O red cells (natural Iag or rbc)	DIRECT AGGL'N
Febrile Agglutinins (widal) (weil Felix) (francisella) (brucella)	Ab	Bacteria (natural ag) - S. typhi & paratyphi - P. vulgaris - F. tularensis - B. abortus	
IM	Ab	Sheep, horse or beef rbc (natural heterophil ags)	
RPR	Ab	charcoal with lecithin, cardiolipin attached	PASSIVE AGGL'N
RF	Ab	Latex particle with human IgG attached	
Rubella	Ab	tanned red cells with rubella ag attached	
Thyroglobulin	Ab	red cells with thyroglobulin attached	REVERSE PASSIVE
CRP	Ag	latex particle with anti-CRP attached	
Pregnancy	Ag	latex or red cells with HCG attached	AGG OR HEMOGLUTINATION INHIBITION

## **BACTERIA WITH INCLUSIONS**

1. MYCOBACTERIUM – Much granules (lipids)
2. CORYNEBACTERIUM diphtherial – Metachromatic/Volutin/BABES-ERNST (polyphosphate)
3. YERNISIA pestis – Bipolar bodies

## **BACTERIA WITH CAPSULE (polysaccharide)**

*H. influenzae*

*N. meningitis*

*K. pneumoniae*

*S. pneumoniae*

*B. anthracis (polypeptide)*

## **BACTERIA WITH FLAGELLA**

- Vibrio species – MONOTHRICHOUS
- Enterobacteriaceae (except Klebsiella & shigella)
  - TUMBLING** – Listeria
  - DARTING** – Campylobacter
  - GLIDING** – Capnocytophaga

## **BACTERIA WITH SPORES**

- Bacillus – Aerobic
- Clostridium – Anaerobic

## **DIFFERENTIAL LEUCOCYTE COUNT**

Neutrophils	(65%)
Lymphocytes	(25%)
Monocytes	(6%)
Eosinophils	(3%)
Basophils	(1%)

## SUMMARY OF COMMON ANTIBIOTICS

ANTIBIOTIC	MECHANISM OF ACTION	TARGET BACTERIA
Penicillin	Inhibits Cell Wall Synthesis	Gram Positive Bacteria
Ampicillin	Inhibits Cell Wall Synthesis	Broad Spectrum
Bacitracin	Inhibits Cell Wall Synthesis	Gram Positive Bacteria as Skin Ointment
Cephalosporin	Inhibits Cell Wall Synthesis	Gram Positive Bacteria
Tetracycline	Inhibits Protein Synthesis	Broad Spectrum
Streptomycin	Inhibits Protein Synthesis	Gram Negative Bacteria and Tuberculosis
Sulfa Drug	Inhibit Cell Metabolism	Bacterial Meningitis and Urinary Tract Infections
Rifampicin	Inhibits RNA Synthesis	Gram Positive Bacteria and Gram Negative Bacteria
Quinolones	Inhibits DNA Synthesis	Urinary Tract Infections