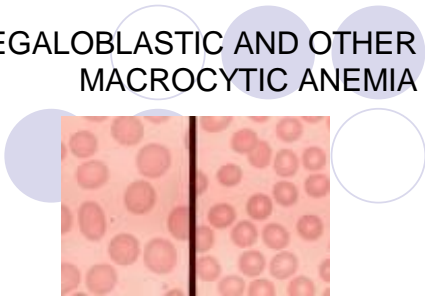


MEGALOBLASTIC AND OTHER MACROCYTIC ANEMIA



MACROCYTOSIS

- MCV > 100 fL
- MCHC – Normal
- False Macrocytosis in Instrument
 - Hyperglycemia
 - Cold Agglutinins
 - Leukocytosis

MEGALOBLASTIC

- Nuclear Cytoplasmic Asynchrony
 - Disrupted DNA Synthesis
- Folate Deficiency
- Vitamin B12 Deficiency
- Other

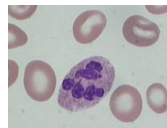
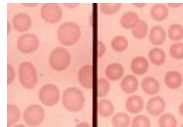
CLINICAL FINDINGS

- Dyspepsia
- Glossitis
- Lethargy, Weakness
- Neurological Changes in Vitamin B12 Deficiency



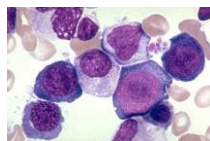
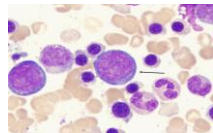
LABORATORY FINDINGS

- Peripheral Blood
 - Macrocytic, Normochromic
 - Leukocytes and Platelets Decreased
 - Oval Macrocytes
 - Hypersegmented Neutrophils



LABORATORY FINDINGS

- Bone Marrow
 - Hypercellular
 - Decreased M:E ratio
 - Nuclear-cytoplasmic asynchrony



LABORATORY FINDINGS

- Other
 - Vitamin B12
 - Serum or Red Cell Folate

FOLIC ACID

- Dietary Deficiency
- Increased Requirement
- Malabsorption
- Drug Inhibition
- Excessive loss

FOLATE LEVELS

- Serum = >2 ng/ml
- Red Cell = 160-700 ng/ml

VITAMIN B 12 (COBALAMIN)

- Absorption
- Transport

VITAMIN B 12 DEFICIENCY

- Pernicious Anemia
 - Shilling Test
- Other Causes of Malabsorption
- Nutritional
- Other Causes

VITAMIN B 12 LEVELS

- 247-800 pg/ml

VITAMIN B 12 THERAPY

- Vitamin B 12
 - Oral
 - Parenteral – Pernicious Anemia

OTHER MEGALOBlastic ANEMIAS

- Drugs
- Enzyme Deficiencies
- Congenital Deficiencies
- Other Hematopoietic Diseases

MACROCYTIC ANEMIA WITHOUT MEGALOBlastic

- Alcoholism
- Liver Disease
- Stimulated Erythropoiesis
- Hypothyroidism
