Vitamin B12 deficiency

Authors: Marianela Posada, MD

Category: Red Cell: Other Disorders > Megaloblastic Anemia

Description:

A 20-year-old female with a past medical history of Graves-Basedow disease on treatment with methimazole for six years, was addmitted to the emergency room for anemia and fever. Blood tests showed hemoglobin of 5.9 g/dl, mean corpuscular volume 105 fl, platelets 100000 cells/ml, total leukocytes 2500 cells/ml, neutrophils 1000 cells/ml, and reticulocytosis 3.88 %. Additionally, biochemistry tests revealed a total bilirubin of 1.42 mg/dl (Indirect bilirubin 1.06 mg/dl). In the next days her neutrophil count dropped to 200 cells/ml and her platelets to 40000 cells/ml. The direct antiglobulin test was negative. Bone marrow aspiration was hypercellular with dysplasia in all hematological series, dyserythropoietic changes, megaloblasts, nucleus-cytoplasm asynchronism, binucleation, and abundant mitosis, and megaloblastic granulocytes with maturational asynchronism. Complementary laboratory evaluation demonstrated Vitamin B12 levels of 80 pg/ml. Upper gastrointestinal endoscopy was positive for atrophic gastritis and anti-intrinsic factor antibodies were positive, in consequence a diagnosis of Addison Biermer Megaloblastic Anemia was made. She started Vitamin B12 intramuscular supplementation leading to a rapid recovery

Number of Units: 3

Megaloblastic anemia (100x). 1

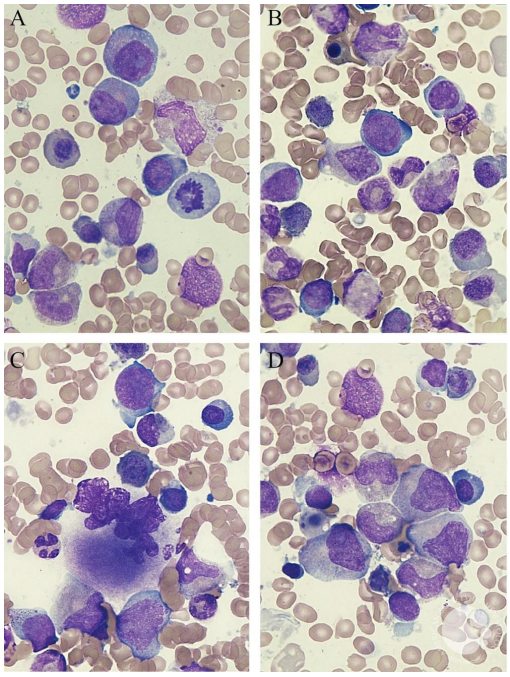
Image ID: 63316

Authors: Marianela Posada, MD;David Garrido, MD;Gimena Dos Santos, MD;Sofia Grille, MD, PhD

Category: Red Cell: Other Disorders

Description:

Megaloblastic anemia (100x).



Megaloblastic anemia (100x). 2

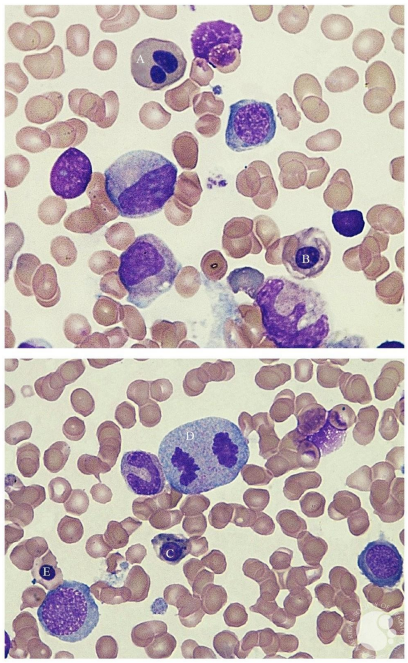
Image ID: 63317

Authors: Marianela Posada, MD;David Garrido, MD;Gimena Dos Santos, MD;Sofia Grille, MD, PhD

Category: Red Cell: Other Disorders > Megaloblastic Anemia

Description:

Erythroid displasia (100x): Nuclear lobulation (A), defective haemoglobinisation with vacuolation (B), detached nuclear fragments (Howell-Jolly bodies) (C), mitotic figure (D), nucleocytoplasmic asynchrony (E).



Megaloblastic anemia (100x). 3

Image ID: 63318

Authors: Marianela Posada, MD;David Garrido, MD;Gimena Dos Santos, MD;Sofia Grille, MD, PhD

Category: Red Cell: Other Disorders > Megaloblastic Anemia

Description:

Erythroid displasia (100x): Binuclearity (A), cytoplasmatic bridging between cells (B), nucleocytoplasmic asynchrony (C), macronormoblast (D), detached nuclear fragment (E)