THE JOURNAL OF OBSTETRICS AND GYNECOLOGY OF INDIA

The Journal of Obstetrics and Gynecology of India (March–April 2013) 63(2):138–139
DOI 10.1007/s13224-011-0069-9

CASE REPORT

Reversible Pure Red Cell Aplasia of Pregnancy: A Therapeutic Challenge

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Received: 7 January 2011 / Accepted: 18 August 2011 / Published online: 14 April 2012

Keywords Pure red cell aplasia · Pregnancy

Introduction

Anemia in pregnancy is usually a result of hemodilution and iron/folic acid deficiency. Pure red cell aplasia (PRCA) has rarely been described during pregnancy with only case reports available in English literature. The clinician should be able to distinguish it from aplastic anemia and since, spontaneous recovery can be expected following delivery, neither corticosteroids nor termination of pregnancy are warranted [1, 2].

Case Report

A 28 years old woman, primigravida, came to medicine department with history of dyspnoea and fatigue. She had history of caesarean section 15 days back in view of obstructed labour. The baby was still born. On detailed history, there was no history of ante-natal check up, jaundice, blood loss, drug intake, fever, photosensitivity, skin rashes, joints pain, and blood transfusion in past. On examination, she had severe anaemia with no organomegaly and lymphadenopathy.

Laboratory features revealed severe normocytic normochromic anemia (Hb 3.2 gm %) with MCV of 102 fl, normal TLC, normal platelets counts and low reticulocyte count (0.2%). Routine biochemistry was normal and serum iron profile was with in normal limits. Bone marrow smears revealed normoblastic erythropoiesis with a selective red cell hypoplasia (nucleated erythroid precursors <5%), normal granulopoiesis and megakaryopoiesis with normal iron stores. There was no morphological evidence of Parvovirus infection (Fig. 1). Viral titers were negative for Epstein Barr virus, Hepatitis A, B viruses, and Cytomegalovirus. Antinuclear antibody, rheumatoid factor, LE cell, and Coomb's test were negative. Serum vitamin B12 and Folate levels were within normal limits. Radiograph and computed tomography scan of the chest were done to rule out thymoma, which were normal. Patient's erythropoietin level could not be done due to non-availability of the kit. A diagnosis of pure red cell aplasia was made. Patient was managed with 6 units of blood transfusion, antibiotic therapy, antiseptic dressing. At the time of discharge, Hb was 9.2 gm% and patient was followed weekly for 6 weeks. After 6 weeks of delivery, hemoglobin level improved spontaneously (Hb 12.4 gm %) with MCV 87 fl and bone marrow aspiration showed normoblastic erythropoiesis with erythroid series in various stages of maturation (nucleated erythroid precursors 25%).

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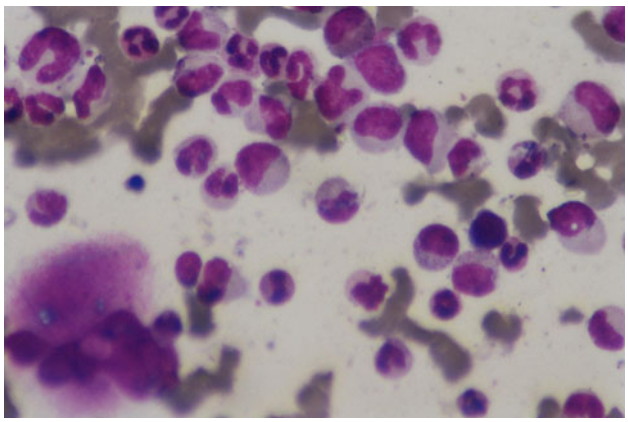

Fig. 1 Bone marrow picture showing occasional normoblasts

Discussion

PRCA encompasses many disorders leading to the selective failure of erythropoiesis [3]. Anemia, reticulocytopenia and absent or decreased marrow erythroid precursor cells define the syndrome. The erythrocytes are usually normocytic or occasionally macrocytic. Neutrophil and platelet counts are normal in PRCA. Most cases are idiopathic but it has been most often associated with thymoma, lymphoid malignancy, collagen vascular disorders, viral infection, drugs, and pregnancy [4]. PRCA appears to be immunologically mediated in idiopathic cases.

PRCA occurring during pregnancy is extremely rare but an important clinical entity to recognize because anemia does not respond to haematinics and adverse fetal outcome may result if the hemoglobin level is not adequately controlled [1, 4, 5]. An IgG inhibitor of blast forming unit erythroid (BFU-E) was described during the course of pregnancy complicated by red cell aplasia [4]. The inhibitor does not appear to cross the placenta. Common features of PRCA in pregnancy include the onset of anemia early in pregnancy and prompt recovery soon after the delivery: the condition can occur in any pregnancy and may relapse in subsequent pregnancies [4]. PRCA of pregnancy appears to be a distinct clinical entity with a good prognosis unlike pre-existing PRCA unrelated to pregnancy and aplastic anemia of pregnancy [2]. In our case the diagnosis of PRCA was made after delivery in view of low Hb, normocytic normochromic anemia and decreased erythroid bone marrow precursors. The excellent recovery with in few weeks of delivery further supports the diagnosis of PRCA of pregnancy.

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