ABSTRACT

INTRODUCTION AND BACKGROUND:

Pancytopenia is the simultaneous occurrence of anaemia, leucopenia, thrombocytopenia and it is a not a disease but rather a clinico-hematological entity encountered in clinical practice. Pancytopenia is a feature of many serious and life threating diseases. It is generally due to decrease in hematopoietic production in bone marrow resulting from nutritional deficiencies, infections, inflammation, cancers, chemotherapeutic drugs and other toxins. Different studies conducted at different centres showed varying frequencies of diseases producing pancytopenia. The pattern of disease leading to pancytopenia may vary in different population groups with their differences in age pattern,nutritional status and the prevalence of infection. It is generally due to decrease in hematopoietic production in bone marrow resulting from nutritional deficiencies, infections, inflammation, cancers, chemotherapeutic drugs and other toxins. Different studies conducted at different centres showed varying frequencies of diseases producing pancytopenia. The pattern of disease leading to pancytopenia may vary in different population groups with their differences in age pattern, nutritional status and the prevalence of infection

OBJECTIVES OF OUR STUDY

1)To study the various patterns of clinical presentation and co-relate hematological parameters & bone marrow findings with clinical findings, in

differentiating various causes of pancytopenia. 2)To estimate frequency of different diseases producing pancytopenia.

MATERIALS AND METHODS:

Data consists of primary data collected by the principal investigator directly from **100 cases** of PANCYTOPENIA patients admitted in the medical ward in Coimbatore Medical College Hospital. This is a cross-sectional/observational study done for a period of one year from july 2017 to june 2018. ***Inclusion criteria*** 1.All patients above age 18 yrs & below 65 yrs.2.Patients with Hb <10 g%, Total leucocyte count <4000 cells/mm3, platelet count < 1,50000 cells/mm3. ***Exclusion criteria :*** 1.Patients below 18yrs of age. 2. Diagnosed case of malignancy including leukaemia receiving chemotherapy or radiotherapy.

RESULTS:

The age of the patients ranged from 18 years to 65 years with a mean age of 45 years. Males accounted for 61 cases (61%) and female 39 cases(39%) with a M:F ratio of 1.5:1. Commonest presenting complaint was fatigue, bleeding manifestations and dyspnoea. Commonest physical finding was pallor followed by cardiac failure and then hepatomegaly & splenomegaly. Lowest haemoglobin percentage was 1.6 gm/dl and it was noted in a case of aplastic anaemia. Lowest total leucocyte count was 500 cells/mm3 and noted in a case

of acute promyelocytic leukemia. Lowest platelet count of 2000 cells/mm3 was noted in a case of aplastic anaemia. Serum vitamin B12 level is low in 59% of patients of which 36% of patients were found to have megaloblastic anemia. Abnormal RFT/Renal failure is noted in only 7% of patients which were mainly seen in multiple myeloma & malaria patients. Abnormal LFT is observed only in 25% of patients of which chronic liver disease, hematological malignancy & infection were the major cause of pancytopenia. Dimorphic anaemia (microcytic & macrocytic) was predominant blood picture in pancytopenic patients. Hypercellular marrow was noted in 72 patients and the common cause was megaloblastic anaemia, followed by leukemia, infections, MDS and chronic liver disease. Hypocellular marrow was noted in 18 patients and commonest cause was aplastic anaemia. Finally, by this study, Megaloblastic anemia (36 %) was found to be the commonest cause of pancytopenia followed by hypoplastic / aplastic anemia (18%), infections (12%), myelodysplastic syndrome(10%), chronic liver disease(10%), autoimmune disorders(8%) and hematological malignancy(6%).Infections encountered in this study were HIV, TB and MALARIA. Of hematological malignancies, acute lymphoblastic leukemia was the commonest followed by multiple myeloma and one case of acute promyelotic leukemia & hairy cell leukemia.