

"Prevalence of anaemia, iron deficiency anaemia and haemoglobinopathies among pregnant mothers attending 300- bedded Pyin Oo Lwin General Hospital"

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Abstract

This hospital- and laboratory-based, cross-sectional descriptive study was done at 300-bedded Pyin Oo Lwin General Hospital from September 2014 to February 2015. The purpose of this study was to determine severity of anaemia and types of abnormal haemoglobin among pregnant women who attended antenatal clinics of study hospital. A total 500 pregnant women were enrolled in which hematological parameters were assessed by using Pentra-60, haematology auto-analyzer and serum ferritin level by Mini-vidas, fully-automated immunology analyzer. HbH inclusion detection by brilliant cresyl blue dye test and Hb E by NESTROFT (Naked Eye Single Tube Red Cell Osmotic fragility test) were done and Agarose gel electrophoresis by SAS- MX Alkaline Hb-10 kits for qualitatively. The overall prevalence of anaemia was 64.2% and third trimester group was significantly higher than other groups ($p < 0.05$). Moreover, 108 out of 321 anaemic cases (21.6%) were iron deficiency anaemia and 89 cases (17.8%) had haemoglobinopathy in which 43 cases (8.6%) haemoglobin E trait (Hb AE), 6 cases (1.2%) β -thalassaemia trait (HbAA₂), 2 cases(0.4%) haemoglobin E β -thalassaemia (HbEF) ,36 cases(7.2%) carrier of α -thalassaemia trait (Hb AH) and 2 cases were Hb H disease (HbAA₂H), respectively. There was positive correlation between haemoglobin level, haematocrit, rbc count, mean corpuscular volume and mean corpuscular haemoglobin with haemoglobinopathy cases ($p = 0.001$, $p = 0.016$). Therefore, this study recognizes the high prevalence rate and highlights that anaemia remains a common health problem among pregnant women and it is also required for screening programs and clinical management of haemoglobinopathies in this area.