

Abstract

OBJECTIVES:

To determine the prevalence of anaemia during pregnancy in Anuradhapura district and evaluate present screening methods for anaemia.

METHODS:

Modified WHO 30 cluster sampling method with increased precision was used to estimate the prevalence of anaemia in the Anuradhapura district, Sri Lanka. Serum haemoglobin was measured using methemoglobin method. Clinical examination was carried out to evaluate the conjunctival method in anaemia screening. Values recorded from haemoglobin colour scale method used in the field antenatal clinics were collected.

RESULTS:

A total of 990 pregnant women participated in the study. In the first, second and third trimesters, prevalence of anaemia was 7.6%, 19.7% and 19.3% respectively. Gestational age adjusted anaemia prevalence among pregnant women in this study population was 14.1% (95% CI 12.0-16.4%). Mean and median haemoglobin concentration of the study sample was 11.8g/dL (SD 1.02g/dl and IQR 11.2-12.5g/dl). Among anaemic pregnant women, average values for Mean Corpuscular Volume (MCV), Mean Corpuscular Haemoglobin (MCH), and Mean Corpuscular Haemoglobin Concentration (MCHC) were, 82.9 fl (SD 11.5), 27.6 (SD-3.6) pg/cell and 32.9g/dl (SD 1.8) respectively. Sensitivity and specificity of haemoglobin colour scale method was 50% (95% CI 29.0-71.0%) and 76.3% (95% CI 66.9-83.7%) respectively. Sensitivity and specificity of conjunctival method in detecting anaemia during pregnancy was 18.8% (95% CI 11.9-28.4) and 69.3% (95% CI 58.2- 78.6%).

CONCLUSIONS:

Prevalence of anaemia in the district of Anuradhapura was less than 50% of the estimated prevalence for Sri Lanka. Both haemoglobin colour scale and conjunctival method were having low validity in detecting anaemia in pregnancy.