

NUTRITIONAL INTAKE, FOOD HABITS AND IRON STATUS OF PREGNANT MOTHERS IN THE URBAN, RURAL, FISHING AND ESTATE POPULATIONS IN SRI LANKA

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Iron deficiency anaemia (IDA) is a common type of anaemia in pregnancy. The aim of this study was to assess the prevalence of iron deficiency anaemia in a group of Sri Lankan pregnant women from four communities (urban, rural, fishing and estate) and further elucidate the usefulness of soluble transferrin receptor (sTfR) as a marker for iron deficiency during pregnancy, define iron status by using serum ferritin, sTfR, red cell indices and haemoglobin.

Two hundred sixty one pregnant mothers aged 18-35 years in the second trimester of pregnancy attending antenatal clinics (first visit) from the communities in the Urban (Colombo), Rural (Kandy), Fishing (Negombo) and Estate (Nuwara-Eliya) sectors were selected as the study sample. One hundred and sixteen, age matched, non-pregnant, non-lactating mothers were included as the control group. They were selected from the same communities. A three consecutive day 24-hour, recall dietary survey was conducted, with weighing of cooked foods on one day. Blood samples collected from both groups were analysed for haemoglobin (Hb), serum ferritin including sTfR assay. The diagnostic cut-off for IDA was as follows. Hb <11.0g/dl, S. Ferritin ≤ 12 µg/l and sTfR > 2.8 mg/l.

IDA was common in the estate community in both the pregnant (30%) and the non-pregnant groups (23.3%). A prevalence of 18.9, 12.9 and 9.8 % was seen in the fishing, rural and urban communities respectively. Among the non-pregnant group, no iron deficient mothers were detected in the rural and urban communities. The fishing community showed 3.5% iron deficiency.

The study shows that sTfR levels start increasing even when other parameters of IDA were in the normal range. Therefore, sTfR assay appears to be a sensitive indicator of iron deficiency and can be used to detect very early stages of iron deficiency that cannot be identified by other parameters.