

Anemia among antenatal mothers with better healthcare services in a rural area of India

Sir,

Anemia is a major public health problem during pregnancy, especially in developing countries like India. The National Nutrition Monitoring Bureau (NNMB), District Level Household Survey-2 (DLHS), and Indian Council of Medical Research (ICMR) surveys showed that over 70% of pregnant women in the country were anemic, while the National Family Health Surveys 2 and 3 reported a comparatively lower prevalence of 50 and 58%, respectively.^[1,2] In contrast to this, another study showed the prevalence as 84%.^[3] There is a critical need to rapidly expand efforts with respect to prevention and treatment of anemia among antenatal mothers.^[4] There are few studies to assess anemia among antenatal mothers, with better maternal and child health services in a rural area, and in this context, the present study was conducted in a rural field practice area of JIPMER, Puducherry, India.

Data was collected from the records of antenatal mothers registered for pregnancy from April 2010 to March 2011. The total population of the field practice service area is around 10,000, distributed in four villages, namely, Ramanathapuram, Thondamanatham, Thuthipet, and Pilliyarakuppam. Anemia was categorized into mild (9-10 gm/dl), moderate (7-8.9 gm/dl), and severe (<7 gm/dl) type of anemia based on the World Health Organization (WHO) criteria. All of them were supervised for the intake of Iron and Folic acid tablets by field Auxiliary Nurse Midwives (ANMs) and regularly monitored for anemia.

A total of 157 antenatal mothers registered and one-third of them were in the 21-23 year age group (33.8%, 53). About 94 mothers were found to be anemic and prevalence of anemia in our study was found to be 59.9%. A majority of them were mildly anemic (51, 32.5%), followed by

moderate (42, 26.8%), and severe anemia (1, 0.6%). The difference in prevalence of anemia in different areas was found to be statistically significant ($P = 0.001$). The prevalence was highest in Ramanathapuram (86.2%), followed by Thondamanatham (64.3%), Thuthipet (53.8%), and Pilliyarakuppam (38.9%).

Our study showed that anemia among antenatal mothers is an important public health problem in this area, but the severe anemia reduced to less than 1%. Also, some areas showed improvement in mild and moderate anemia compared to others. This is mainly because of the services provided by the departmental health functionaries. The difference in national surveys are mainly due to the difference in social, cultural, and dietary pattern, urban versus rural area of residence, healthcare delivery system, and services provided by the concerned states. Thus, it is concluded that newer approaches should be adopted to tackle mild and moderate anemia, especially in some micro areas where the burden is more and determining factors might be different from other areas where the anemia burden is less. It is recommended that research be strengthened within the regional area, at the district level in the country, to elucidate the differential factors at that level, so that appropriate interventional measures can be applied at that level, to reduce the burden of anemia among antenatal mothers in the community.

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