

The Burden of Non-Communicable Disease Risk Factors and Haematological Indicators of Infections among the Rural, Semiurban and Urban inhabitants of the Yanadi Tribal Population of South India

B MOHAN REDDY^{1,2}, SAA LATHEEF², R PRANAVCHAND¹

¹ *Molecular Anthropology Lab, Indian Statistical Institute, Hyderabad, India*

² *Department of Genetics, Osmania University, Hyderabad, India*

Abstract: We evaluated the impact of transition from rural to semiurban to urban habitats on the epidemiological profile in general and particularly on the prevalence of non-communicable disease (NCD) risk factors among the Yanadi tribe of Andhra Pradesh, India. We compared the epidemiological profile of the Yanadi tribe with that of the other Indian tribes. A total of 683 adults aged ≥ 35 years were recruited from urban (n=154), semiurban (n=149) and rural (n=380) areas of the Nellore District in Andhra Pradesh. We took anthropometric measurements and blood pressure readings and analysed blood samples for red blood, total white blood, platelet and differential white blood cell counts, glucose and lipid profiles. These data were used to determine the prevalence of abnormal haematological indices, under nutrition, anaemia, hypertension, type 2 diabetes, dyslipidemia and metabolic syndrome. Overall, the Yanadi tribe showed a relatively high prevalence of undernutrition (21.66%), anaemia (33.52%), high RBC (30.16%) white blood (15.22%), platelet (17.56%), neutrophil(4.53%),lymphocyte (19.76%) and eosinophil (26.79%) and low monocyte (43.48%) counts, obesity (WHR, 72.47% and waist circumference, 25.03%), hypertension (27.81%), type 2 diabetes (9.95%), metabolic syndrome (34.55%), low HDL cholesterol (52.56%), high total cholesterol (21.22%), high triglycerides (38.65%) and dyslipidemia (70.42%). Significantly more prevalence of higher eosinophil count, anemia, LDL cholesterol level, isolated hypercholesterolemia, total cholesterol level, total cholesterol/HDL cholesterol ratio, LDL cholesterol/HDL cholesterol ratio ($p < 0.01$) was observed in the urban adults than those in the rural habitats, albeit no clear-cut trend of increase in the prevalence of NCD risk factors was seen from rural-semiurban-urban habitats. Besides the potential for infectious diseases, the overall burden of under nutrition, anemia and risk factors for NCDs were considerably high among Yanadi, which appears to be generally the case with other Indian tribes as well.

Key words: Undernutrition, anaemia, haematological indices, non-communicable disease risk factors, Yanadi tribe, South India