

29th International Congress on

Prevention of Diabetes and Complications

September 27-28, 2018 | Berlin, Germany

Burden of Diabetes, Prediabetes and other associated lifestyle risk factors in the permanently settled tribals in tribal area and in urban areas of the northern state of sub-Himalayan region of India

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Statement of problem: Rapid urbanization has been associated with high prevalence of diabetes in indigenous populations. The study is based on the hypothesis of the effect of lifestyle changes on Prediabetes and Diabetes in nomadic tribes settled in urban areas and also on tribal tribals.

Methodology : It was a population based cross sectional study. The population studied were the tribals, representing the traditional people settled in mountainous terrain centuries ago leading a nomadic life and migrating from upper reaches of Himalayas to Himalayan foothills during winters. Some of them settled in urban areas. Men and women above 20 years were considered as eligible subjects. A Probabilistic proportionate sampling method was used. The final sample of 8000 individuals consisting of 4000 subjects each of tribal and urban tribals were evaluated.

Findings: The urban tribals were engaged in white collar and business jobs (33%) vs 11.1% in tribal tribals ($p=0.00$). Urban tribals had mild physical activity in 19.3% vs 8.6% in tribal tribals ($p=0.00$) whereas tribal tribals had significantly more heavy physical activity (23%) vs 7.3% in urban tribals ($p=0.00$). In urban tribals central obesity was seen in 59% of cases vs 43.3% in tribal tribals ($p=0.00$). Urban tribals had statistically more (29.3%) overweight individuals as compared to 13.3% in tribal tribals ($p=0.00$). Stage 1 hypertension and stage 2 hypertension was seen in 22.8% and 5.3% respectively in urban tribals which is statistically higher than seen in tribal tribals (10.2% and 0.9% respectively) ($p=0.00$). The age distribution of prevalence of hypertension was high amongst urban tribals of more than 65 years (54%) followed by 51 to 56 years (48.3%) and 36 to 50 years of age (34.2%). Diabetes mellitus was significantly higher in urban tribals (7.8%) vs 3.9% in tribal tribals ($p=0.00$). Prehypertension and impaired fasting glucose was statistically more often seen in tribal tribals (78.8% and 2.4%) vs 58.2% and 0.7% respectively in urban tribals ($p=0.00$).

Conclusion and significance: In conclusion prevalence of Diabetes mellitus, hypertension, central obesity and physical inactivity was higher in urban tribals. On contrary prehypertension and impaired fasting glucose was significantly higher in tribals in tribal areas which should alarm the policy makers and necessitate a need for early preventive intervention.