Metabolic syndrome and health-related behaviors associated with pre-oral cancerous lesions among rural adults in Taiwan

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*Objectives*: To explore the associations of health-related behaviors, metabolic syndrome, and risk factors in adults with pre-oral cancerous (POC) lesions in rural, disadvantaged communities with a high prevalence of oral cancer.

*Setting*: Community-based health survey in the western coastal area of Yunlin County, Taiwan.

*Participants*: 5,161 adult residents participated in this study.

*Outcome measures*: Assessed parameters included oral leukoplakia, oral submucous fibrosis, fasting blood glucose, triglycerides, high-density lipoprotein cholesterol, blood pressure, and waist circumference. Statistical analyses included descriptive statistics, chi-squared tests, and multivariate binary logistic regression.

*Results*: A high percentage of participants were found to have metabolic syndrome (40%) and POC lesions (7.3%). Participants with POC lesions tended to be male \((p < .001)\), betel nut chewers \((p < .001)\), and smokers \((p < .001)\); have a low level of education \((p < .001)\), seldom undergo dental check-ups \((p < .01)\), irregularly participate in physical activity \((p < .01)\), and have metabolic syndrome \((p < .01)\).

*Conclusions*: Although male sex and disadvantaged socioeconomic status are nonmodifiable factors associated with POC and metabolic syndrome in adults, several factors, notably health behaviors, are modifiable. Clinicians can reduce the incidence and consequences of POC by developing programs for early detection, encouraging regular dental check-ups, and initiating individualized, health-promoting behavior modification programs for reducing risky behaviors associated with oral cancer.

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