

Prevalence and associated risk factors of obesity in populations of Kazakh children

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Obesity has become a major public health issue worldwide. But to date, there is little information about prevalence of obesity in children of ethnic minority in China. Our team carried out a series research to evaluate the epidemiology and risk factors of obesity in children who lived in Xinjiang from 2001 to 2010. A total of 10247 school children of Han, Hui, Uygur and Kazak nationalities aged 6-14 years were selected by a cluster sampling from Xinjiang for anthropometric measurement and demographic survey. Prevalence of obesity was 5.09%, 3.08%, 4.83%, and 8.94% of Han, Hui, Uygur and Kazakh nationalities, respectively. Prevalence of obesity in Kazakh is higher than that of an average national level (8.1%). In order to explore the risk factors relevant with obesity in children including gene level and environmental factor, our team carried out case-control strategy to study all above factors in Han, Hui, Uygur and Kazakh nationalities. We genotyped putative causative genes that may be involved in obesity including *ApoE*, *FTO*, β ₃AR, *leptin* gene polymorphism and assessed the association those genes with obesity. The frequency of the above genotypes was significantly different in Han, Hui, Uygur and Kazakh nationalities. To explore the influence of intestinal flora on obesity, real-time fluorescence quantitative PCR was used in Kazakh children. An association between reduced gut Bacteroidetes and Bact/Firm ratio with obesity in female Kazakh children was identified. Further studies are necessary to elucidate the mechanism behind these changes as well as the value of determining their presence for predicting obesity.

Biography

Pei-ru Xu, chief physician, Professor, master's and doctoral tutor, has devoted herself to a special area of children health in Xinjiang, China. She is the Vice President of the First Affiliated Hospital of Xinjiang Medical University and a member of the National Council for continuing medical education. Besides, she is a committee member of Pediatrics branch of Chinese Medical Association, EMB Professional Committee of Chinese Medical Doctor Association and the Ministry of Education Virtual Research Center of Evidence-Based Medicine in China. In recent years, she has already charged of a number of research projects including the National Natural Science Foundation of China and the General Project of Natural Science Foundation of the Xinjiang Uygur Autonomous Region. She has published more than 70 papers in reputed journals.