Iodine intakes of pregnant women in Guizhou, China

Li Xiao-Song, He Ping Institute of Endemic Diseases Control and Prevention, Guizhou CDC, China

Background

Guizhou, a poor province of western China with a population of 39 million, has a history of severe IDD. The native concentration of iodine in drinking water is very low, with a range of 0.2-9.7 μg/L. A 1978 survey found goiter rates of up to 60%, and a median urinary iodine concentration (UIC) of 25-63 μg/L. It was estimated there were more than 20,000 cretins in the province. In Guizhou, a salt iodization program was initiated in 1978 in severely-affected areas, and spread to the whole province in 1985. Subsequently, the national universal salt iodization (USI) program in China was implemented in 1995. Since then, monitoring has been done every two years, when 40 schoolchildren are randomly selected from 30 schools, proportional to regional population size. The monitoring program in 2005 reported the median UIC in schoolchildren aged 8-10 was 289 μg/L, the goiter rate was 4.4% (3.8% by ultrasonography), and population coverage with iodized salt was 99.12%.

2006 study of pregnant women

From May to October 2006, 496 pregnant women were sampled from ten counties with varying populations of minority groups (including Miao, Buyi, Dong, Tujia and Han peoples) in different location of Guizhou. UIC was measured in spot urine samples. The overall median UIC was 219 μg/L, within the range of 150-249 μg/L recommended for pregnant women by WHO. The percentage of women with a UIC <100 μg/L was 18.7%. However, in two counties, the median UIC was low, at 165 and 172 μg/L, and the percentage of values <100 μg/L were 32% and 41%, respectively. There were no significant differences in UIC among the different minority groups.

Conclusions

The Chinese national USI program has been in place for more than 10 years. The median UIC in pregnant women in Guizhou is well within the recommended range of 150-249μg/L. However, in some counties, the iodine intake of pregnant women remains low. Therefore, in USI monitoring programs, pregnant women should be regularly included as one of the vulnerable target groups. Also, for pregnant women with low iodine intakes from USI, additional iodine supplementation can be considered.