PostScript

LETTERS

Variation in food quality may threaten the validity of epidemiological studies in China

Food safety has become one of the biggest concerns in China, and this may not only put the health of the population at risk but also threaten the validity of epidemiological studies investigating the possible relationship between diet and risk of disease in the country.

This month in China there was a new warning on the quality of milk powder. In 2003, it was reported that at least 13 babies died from malnutrition in China because they were fed fake formula milk, which contained no protein.¹ In the same year, about 20% of 2000 types of food products, which had been officially inspected, failed to meet government standards. The food products that fail to meet the official requirement usually do not contain the basic amount of nutrients that are required, contain additives that are banned in food products or contain an overdose of pesticide residual.² There is great variation in food quality in China. It would not be appropriate to consider the same types of food to be similar if they were produced by different manufacturers or were from different areas, and they may not contain the standard amount of nutrients.

Epidemiological studies on the relationship between dietary intake and risk of disease conducted in China usually obtained have information on dietary intake through food frequency questionnaires.³⁻⁴ These studies were conducted on the basis of the assumption that the quality of food consumed by different subjects was similar over a long period. Furthermore, studies that focused on the effect of certain types of nutrients needed to further assume that the amount of nutrients in food consumed by subjects over the observation period was similar to that expected by the study.⁵ Large variation in food quality would certainly affect the validity of these studies.

Future studies that involve measurement of dietary intake may need to consider the potential bias that could be caused by the variation in food quality in the country.

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Correlation between incidences of hospitalised accidental burns and deprivation scores: an ecological study

Several studies have reported a positive relationship between injury rates and social deprivation.¹⁻³ The relationship between the incidence of accidental burns and increasing social deprivation has been reported.⁴ Gaps in our present knowledge about socioeconomic status and incidence of injuries need to be filled using data from different countries with different levels of development, because injuries, including burns, occur with widening inequalities with different epidemiological aspects in the world.

In this article, I will analyse the incidences of hospitalised cases of accidental burns in relation to deprivation scores of areas using data from two referral burns centres in Bushehr (Chormy Burn Center) and Yazd (Shahid Sadoqi's Center of Burns and Injuries) provinces. All significant burns in both provinces are referred to these centres, which makes for a good epidemiological model. The populations of Bushehr and Yazd provinces are 914 000 and 874 000, respectively. The study covered a period of 6 years from 21 March 1998 to 20 March 2004 in Bushehr and 4 years from 21 March 2000 to 20 March 2004 in Yazd. On the basis of home address, patients were grouped into 16 cities (table 1). During the study period, a total of

846 and 680 patients were hospitalised in the Yazd and Bushehr centres, respectively.

The deprivation scores are based on a combination of 16 census variables derived from specific aspects of educational status, social indices and health services undertaken by the Iranian Planning and Budget Organisation. The scale ranges from 1 to 10; 10 is the highest level of deprivation.⁵

The incidences of hospitalisation (per 100 000 person-years) in the Bushehr and Yazd burn centres were 12.4 and 24.2, respectively. The incidence of hospitalised cases of accidental burns ranged from 3.30 (Dayer) to 27.17 (Yazd) per 100 000 person-years. Pearson's correlation analysis showed a significant association between incidences of hospitalised cases of accidental burns and deprivation scores ($r = -0.606$, $df = 14$, $p = 0.013$). This means that the hospitalisation rates decreased as a function of deprivation scores.

Both total number of admissions for injury and admissions for injuries of higher severity increase with increasing socioeconomic deprivation.¹ The actual incidences of accidental burns that need hospitalisation in the studied areas were higher than our estimation using frequency of hospitalised patients. Therefore, in developing countries, factors other than injury occurrence and severity of injury (such as deprivation score of an area) may influence use of health services. The present finding should assist in formulating strategies to prevent and plan further research. Further studies with case-control design, which take into account other factors such as age, sex, educational level, income, employment, body surface area and causes of burns at the individual level, are warranted to determine other factors that may influence the rate of hospitalisation in developing countries.

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Table 1 Correlation between incidences of hospitalised cases of accidental burn rates and deprivation scores of areas

Population	Incidence of hospitalised cases of accidental burns*	Deprivation scores
Bushehr province		
Bushehr	9.20	4.3
Dashtestan	11.80	6.7
Dashti	5.60	7.2
Dayer	3.30	7.7
Dilam	14.40	7.5
Genaveh	10.70	7.5
Kangan	6.90	7.7
Tangestan	5.60	8.0
Yazd province		
Abarku	11.95	5.6
Ardakan	8.50	5.1
Bafq	10.16	6.2
Mehriz	9.56	6.7
Mibod	24.19	5.1
Tabas	3.67	6.2
Taft	10.16	6.2
Yazd	27.17	3.8

Data of deprivation scores were obtained from the Iranian Planning and Budget Organization.[5]

*Per 100 000 person-years.