

Morbid obesity in a developing country: the Chilean experience

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Introduction

Chile is a country of 16 million people of whom 88% live in an urban setting. Life expectancy is 78.3 years, gross national income per capita is US\$ 4360 and 13.7% of the population lives below the national poverty line. Health conditions in Chile have changed strikingly in the past 50 years. In a brief period of time, Chile has undergone major demographic, epidemiological and nutritional transitions. The proportion of malnutrition among children aged less than 6 years decreased from 37% to 2.9% in the period 1960–2000;¹ in contrast, the prevalence of obesity today reaches 20% among 4-year-old children.² Between 1987 and 2000, the prevalence of undernourished pregnant women decreased from 26.0% to 14.1%; while obesity among them increased from 12.9% to 32.7%.³ Progressive industrialization and urbanization has occurred in Chile during the second half of the 20th century. This has been associated with changes in lifestyle towards unhealthy dietary and physical activity patterns. In many developing countries like Chile, there has been a rapid shift in diet to increased consumption of high energy-dense foods and caloric beverages, animal-source foods, and caloric sweeteners added to many other foods. Between 1980 and 1998, the average daily per capita calorie consumption increased from 2.667 kcal per 11.159 J (21% fat) to 2.844 kcal per 11.899 J (28% fat).³ This dietary pattern, together with a sedentary lifestyle, has been widely associated with obesity.

Comorbidities associated with obesity

In 2003, a National Health Survey showed that prevalence of overweight, non-morbid obesity and morbid obesity was 37.8%, 21.9% and 1.3%, respectively.⁴ Obesity prevalence was significantly higher among people with a lower educational level (odds ratio, OR: 1.5) and the prevalence of morbid obesity was six times higher in low socioeconomic groups.⁴ Comorbidities associated with obesity are also prevalent among the general population: low concentrations of high-density lipoprotein cholesterol (39.3%), hypertension (33.7%), hypercholesterolaemia (35.4%), hypertriglyceridaemia (27.0%) and type 2 diabetes (6.3%). The prevalence of metabolic syndrome was 22.6%. Moreover, the prevalence of a sedentary lifestyle among Chileans is extremely high (89.4%). There are approximately 205 000 people with morbid obesity, most of them suffering its consequences and needing expensive health care. Preliminary data from the Surgical Treatment of Obesity programme conducted by Hospital Clínico Universidad Católica showed a high prevalence of cardiovascular risk factors among young obese subjects (with an average age of 37 years). Often the same individual had two or more risk factors and 10% of the subjects were rated as a high global cardiovascular risk, according to the Framingham Risk Score.⁵

Bariatric surgery

There is strong evidence that non-surgical treatment among subjects with severe or morbid obesity is insufficient.

On the contrary, bariatric surgery, specifically gastric bypass, achieves good long-term results including weight-loss maintenance, reduction of comorbidities and improvement of quality of life. In terms of mortality, bariatric surgery is associated with an 89% reduction in the relative risk of death as well as an 82% reduction of cardiovascular events among morbidly obese patients.⁶ Increasing demand for treatment of morbid obesity and the limitation of conventional therapies to accomplish and maintain substantial weight loss, promoted the creation in the mid-1980s of surgical groups in Chile dedicated to bariatric procedures, most of them located in university centres.⁷ In the past 5 years, bariatric surgery has experienced an explosive development in Chile. During this time, 10 university and private medical centres performed 4040 gastric bypass procedures (36% laparoscopic) and 896 gastric bandings, with an overall mortality rate of gastric bypass of 0.32%. Postoperative complication rates and re-operation rates are similar to those reported in developed countries. Three surgical groups – Hospital Clínico Universidad Católica, Hospital Clínico Universidad de Chile and Integramédica/Hospital San Juan de Dios – have led to the expansion of bariatric surgery in Chile, performing 77% of gastric bypasses in the past 5 years.⁷ This reveals that bariatric surgery is now concentrated in a few surgical groups, mostly from the private health sector.

Facing the burden of obesity

Has the Chilean health sector drawn up multisectorial strategies to fight against

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obesity? In 2004, a group of Chilean experts wrote specific recommendations for patient management and the formation of reference centres for the surgical treatment of obesity.⁸ In addition, a health reform is underway that includes 56 health conditions to be covered by a new law that guarantees access to health care, opportunity, quality and financial protection for every citizen.⁹ Even though some comorbidities of obesity, such as essential hypertension and type 2 diabetes, have been considered in this bill, obesity itself has not. Considering that obesity is a disease on its own, is a recognized risk factor for multiple illnesses and affects a greater proportion of

people in lower socioeconomic groups, it seems reasonable to consider it a public health priority to assure integral treatment of this complex disease among the entire population. A few public hospitals are trying to perform bariatric surgery in Chile, however, this procedure is in direct competition with other digestive-system surgeries such as gastric cancer and cholelithiasis, both of which are highly prevalent diseases in our country that are included in the new bill. This situation means that there are extensive waiting lists for bariatric surgery.

Trends demonstrate a progressive rise in obesity rates among all age groups in Chile. Together with the

implementation of primary prevention strategies to face this problem integrally, it seems reasonable that multidisciplinary treatments that include surgical alternatives should be available for all morbidly obese patients, with no distinction made between the public and the private sectors. We hope that the Chilean experience may be useful for other developing countries experiencing accelerated transitional processes in order to face this challenging public health problem holistically. ■

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