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Surgery or lifestyle interventions?

EDITORIAL

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Laparoscopic gastric bypass surgery in adolescents with obesity shows positive results after one year, but the long-term results are uncertain.

In the Journal of the Norwegian Medical Association, Hjelmesæth et al. have now presented the results from the one-year follow-up of the 4XL study, which seeks to clarify whether laparoscopic gastric bypass surgery is a safe and effective treatment of severe obesity in adolescents (1). The study is a non-randomised comparison of surgery combined with lifestyle intervention versus lifestyle intervention alone.

Since 2004, surgical treatment of severe obesity has been available to adults, and 2500–3000 bariatric surgeries are performed in Norway each year. At present, gastric bypass operations are almost as common as sleeve gastrectomies. According to the Norwegian Quality Register for Bariatric Surgery, women comprise the majority of those who undergo the procedure, the average age is 43, and most have obesity-related comorbidities (2). Currently, the only option for bariatric surgery available to adolescents in Norway is inclusion in the 4XL study. In the course of nine years, 41 adolescents have undergone gastric bypass surgery. The control group consists of adolescents in a lifestyle change programme. As expected, the short-term results following bariatric surgery in adolescents correspond with that of adults

– a weight reduction of about 30 per cent after one year and an improvement in metabolic health. Lifestyle change alone had little or no effect on weight compared to surgery.

Lifestyle interventions in obesity treatment combine caloric restriction and physical activity with training in behaviour control techniques. Weight reduction from such treatment is modest, as this study also shows (3), and the treatment is not without side effects either. At its best, this type of treatment can help people to cope with obesity, improve lifestyle habits and stop weight gain, but multiple rounds of treatment that require great personal effort without achieving the anticipated results can result in feelings of disempowerment and increased shame (4).

> ***«The short-term results following bariatric surgery in adolescents correspond with that of adults – a weight reduction of about 30 per cent after one year»***

The international obesity research community describes obesity as a chronic, progressive disease caused by dysfunctional adipose tissue (5). Like other chronic diseases, obesity is the result of complex biological and social processes that are largely outside a person's control. Recognising that obesity is a chronic disease does not absolve individuals from attending to their own health, but it can help to minimise the shame and stigmatisation. It can also change the attitude of the health services towards people with obesity. Recent studies show that it is not caloric restriction and malabsorption that cause weight loss after bariatric surgery, but the complex physiological response of the anatomical change in the gastrointestinal tract (6). Both the gastrointestinal system and adipose tissue are active endocrine organs.

Bariatric surgery results in changes in hunger and satiety hormones and in communication between the gastrointestinal system, brain and adipose tissue. Knowledge about these effects has contributed to the development of weight reduction medications. Two such medications (Mysimba and Saxenda) are now available to Norwegian patients, but they have not yet been approved for use by children and adolescents. In the future, developments in drug treatment will likely reduce the need for bariatric surgery.

> ***«Lifestyle change alone had little or no effect on weight compared to surgery»***

Beginning adult life with severe obesity can affect a person's choice of education, the social networks they establish, their career opportunities and finances, the partner they choose and their future family life (7). Consequently, there may be sound arguments for offering the most effective obesity treatment to adolescents (8). However, although bariatric surgery is effective, the treatment can have a major impact on a person's life trajectory and cause complications such as abdominal pain, fatigue, and vitamin and mineral deficiencies (9). The surgery does not guarantee lifelong recovery from obesity either (10).

Bariatric surgery for adolescents has been a frequent topic of debate in both the medical community and the media. The 4XL study shows that the treatment is safe and effective in the short term, and there are plans to follow up the participants for many years to come. The study is an important step on the path to better treatment options for this patient group and can play a role in developing more methods for treating adolescents with obesity.

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