Effective management of complex severe obesity

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Severe obesity is a growing problem both in the UK and internationally. It is linked with a range of complications, including type 2 diabetes, and is also associated with depression, poor self-esteem and social isolation. The financial cost to the NHS is estimated to be £5 billion annually. In this article, the authors provide case studies showing how two people with complex severe obesity and associated comorbid conditions were successfully managed by a multidisciplinary weight management service. The significant medical, psychosocial and financial benefits that such an approach may provide are discussed.

Morbid obesity is an ever-increasing problem globally. The UK has the second highest prevalence of obesity in the world (Royal College of Physicians [RCP], 2013). In England, the proportion of adults that was overweight including obese rose from 58% to 65% in men and 49% to 58% in women between 1993 and 2011 (The Health and Social Care Information Centre [HSCIC], 2013). Twenty-four per cent of men and 26% of women in England can be classed as obese (HSCIC, 2013). Obesity and its complications are estimated to cost the NHS £5 billion annually (RCP, 2013). Obesity not only has medical implications but also affects a person's psychosocial well-being and financial standing.

The multidisciplinary management of obesity and its complications has been greatly emphasised by NICE guidelines (NICE, 2006). In the following two case reports, we describe how our multidisciplinary weight-management service was able to effectively manage patients with complex severe obesity and their associated comorbid conditions.

Case report 1

A 47-year-old Caucasian man was referred to our multidisciplinary specialist obesity clinic after approval of funding for bariatric surgery. He had a background of type 2 diabetes, erectile dysfunction and type 2 respiratory failure requiring non-invasive ventilation at home. He had steadily gained weight since being diagnosed with muscular dystrophy 30 years ago and had become a wheelchair user. Both his wife and son were obese: his wife had a gastric bypass and his son was awaiting one.

A thorough assessment in our multidisciplinary weight-management programme revealed several reasons for weight gain and barriers to weight loss. Reduced mobility and sparse social interaction were identified as the predominant barriers. He did not have any underlying psychological issues contributing to his obesity. His motivation to lose weight was to improve his general health and mobility. His initial BMI was 35.5 kg/m^2. He managed to lose weight after attending our 12-week weight management programme and his BMI on completion of the programme was 33.5 kg/m^2. The weight loss, though not dramatic, was hugely beneficial in improving his mobility and quality of life.

During our final assessment after completion of the programme, he declined any surgical intervention for obesity and preferred to continue with our programme. With our

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Article points

1. Severe obesity is associated with a wide range of health complications, including type 2 diabetes.
2. Case studies illustrate that the management of severe complex obesity requires the expertise of a specialist weight-management service.
3. The effective management of complex severe obesity can have significant health, psychosocial and financial impacts on individuals and society.

Key words

- Complex severe obesity
- Multidisciplinary management
- Weight loss

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Page points

1. Complex severe obesity is commonly associated with depression, low self-esteem and social isolation.
2. The management of complex severe obesity requires the expertise of a specialist weight-management service run by a multidisciplinary team.
3. A clear assessment from a multidisciplinary team and a personalised weight-management programme can provide benefits for the individual and financial savings for the NHS.

support and guidance he continues to lose weight whilst having a healthy lifestyle. We feel our multidisciplinary team provided a clear assessment and a personalised weight-management programme that addressed his needs. This has not only ensured that there have been financial savings for the NHS, but also that the most appropriate patient would get funding for bariatric surgery in the current difficult economic climate.

Case report 2

A 37-year-old Caucasian woman with multiple comorbidities was referred to our weight-management service to help her lose weight so that she could be considered suitable for bilateral lower-limb prostheses. She had undergone right above-knee amputation and left Syme's amputation (foot amputation through the ankle and removal of the malleoli) following a road traffic accident 15 years earlier. Following her amputations, she has been a wheelchair user. Her comorbidities included morbid obesity, multiple sclerosis, asthma and suprapubic catheter (awaiting bladder diversion surgery). She had been struggling to lose weight even before the accident and had been through several commercial weight-loss programmes, and attended swimming exercise classes.

Due to immobility following the accident, there had been a pronounced gain in weight. She steadily gained weight over a 10-year period, from 114 kg to 190 kg. There was a transient weight loss with pharmacotherapy followed by weight regain. Her motivation to lose weight was to be mobile again and to be independent. The rehabilitation team insisted on weight loss before any prosthesis could be considered.

She was referred to our multidisciplinary weight-management service for consideration for bariatric surgery. It was difficult to determine an accurate BMI for her, given her bilateral amputation. She weighed 130.7 kg on her initial visit. She went through our structured 12-week structured weight management programme and was found suitable for bariatric surgery. She underwent a successful sleeve gastrectomy and, with regular support from the dietitians and physiotherapists, managed to lose 30.6 kg, which represented 57% of her total excess weight. After successfully losing weight, she was accepted for leg prostheses by the amputee rehabilitation team and is now able to mobilise with assistance. As she gains confidence, she hopes to be able to walk independently in the near future.

Discussion

The prevalence of severe obesity is increasing faster than obesity. It is estimated that the prevalence of obesity will increase by 33% and severe obesity by 130% over next two decades (Finkelstein et al, 2012). There is a significant increase in the incidence of coronary artery disease, various cancers and other comorbidities, such as metabolic syndrome, type 2 diabetes, hypertension, osteoarthritis and obstructive sleep apnoea, in severely obese people. Depression, poor self-esteem and social isolation due to stigmatisation are commonly associated with people with complex severe obesity.

Obesity management is complex and, as most healthcare professionals believe, it is not just about eating less and exercising more. Management of complex severe obesity requires the expertise of a specialist weight-management service. The Mid Yorkshire NHS Trust, which caters to a population of more than half a million, runs a very successful weight-management service. Our multidisciplinary team includes bariatric physicians, specialist dietitians, specialist physiotherapists, clinical psychologists, a moving and handling expert, an image consultant and very good administrative support. We also have a close partnership with the multidisciplinary bariatric surgery team.

All patients are initially assessed by the clinician so that treatment of their medical comorbidities, which might have an impact on their future management, can be optimised and to exclude any endocrine pathology. They subsequently attend a 12-week weight-management programme that is delivered either as group sessions or on a one-to-one basis based on individual needs. A support group is run for patients who have completed their weight-management programme, and further follow-up with our medical team is also provided, if required. We attribute our success to the holistic

approach used to address this complex issue whilst networking with other healthcare professionals.

With an approved funding, the man discussed in the first case report would normally have been referred for surgery 3 years ago. However, by attending our weight-management programme he underwent a comprehensive assessment and successful medical intervention, which avoided surgery. Our programme completely changed the life of the woman discussed in the second case report. She has regained her independence and her quality of life has improved immensely. Given their backgrounds, each of these cases would have represented a high risk for surgery. Only a small proportion of cases, where individuals have failed to lose weight despite attending a comprehensive weight-management programme, would be suitable for metabolic surgery. Most procedures are irreversible with psychological counselling and adequate preoperative preparation being necessary.

Conclusion

The Government has recently taken the initiative to address the challenges of obesity and its complications. The RCP working party report, *Action on obesity: Comprehensive care for all* (RCP, 2013), recommends setting up dedicated multidisciplinary weight-management services in secondary care. Success stories, such as those outlined here, highlight the significant medical, psychosocial and financial impact such services can have on the affected individuals and on society. ■

Finkelstein EA, Khavjou OA, Thompson H et al (2012) Obesity and severe obesity forecasts through 2030. *Am J Prev Med* **42**: 563–70

NICE (2006) *Obesity: Guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children*. NICE, London. Available at: http://www.nice.org.uk/cg43

Royal College of Physicians (2013) *Action on obesity: Comprehensive care for all*. Report of a working party. RCP, London. Available at: http://bit.ly/10Jeo1q (accessed 22.08.13)

The Health and Social Care Information Centre (2013) *Statistics on obesity, physical activity and diet: England, 2013*. HSCIC, Leeds. Available at: http://bit.ly/YFN2DV (accessed 22.08.13)