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Supplementary drug treatment to reduce weight in adolescents with severe obesity

FROM THE SPECIALTIES

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In 2021, the Norwegian Medicines Agency approved the use of daily injection of liraglutide 3.0 mg (Saxenda) as a supplement to lifestyle treatment for weight control in

children ≥ 12 years of age with obesity (isoBMI ≥ 30). We share the treatment experiences of six multidisciplinary obesity clinics in the specialist health service.

A Cochrane review (1) and Norwegian findings (2, 3) show small to moderate weight reductions following family-based behavioural treatment (caloric restriction, physical activity, sleep hygiene) in adolescents with severe obesity. In contrast, bariatric surgery leads to large weight reductions, but also carries a risk of serious side effects (4). Safe and effective treatment alternatives are needed.

Drug treatment

Orlistat (Xenical) is not approved for the treatment of obesity in children aged 12 years or older, and is associated with a small weight-reducing effect on average (< 3 %) and unpleasant side effects (5). Conversely, subcutaneous liraglutide 3.0 mg led to greater weight reduction than placebo (5 %), and few serious side effects (2.4 % vs. 4.0 %) in adolescents in a randomised controlled trial (6). However, two out of three patients treated with liraglutide reported gastrointestinal adverse events, one out of ten had to stop treatment due to side effects, and one patient developed pancreatitis (6). One new case of the eating disorder bulimia and one suicide were registered in the liraglutide group (6).

Indications and experiences

All doctors can prescribe liraglutide 3.0 mg as a supplement to lifestyle treatment for adolescents with obesity. In total, more than 100 young patients with severe obesity attending one of our obesity clinics were given supplementary treatment in the form of liraglutide. Our interdisciplinary teams first reached a consensus on the indication for medicinal treatment, then the doctor initiated the treatment and increased it to the maximum tolerable dose over the course of five weeks. Due to the relatively high frequency of side effects, primarily nausea and abdominal pain, but also reflux and vomiting, patients were followed up every week by our healthcare personnel during this period.

In order to be able to continue treatment beyond an introductory period of 12 weeks at the maximum tolerable dose, patients are required to reduce their BMI or BMI z-score by at least 4 % from the start of treatment. In our experience, most meet this requirement. However, the doctor and patient also take into account the side effect profile in the (shared) decision on whether to continue or terminate the treatment. Although there is no evidence of increased risk of eating disorders with liraglutide, adolescents with obesity are a vulnerable group, and psychosocial factors are given particular attention in the clinical follow-up.

We have experienced that knowledge of caloric restriction and specific dietary changes are needed to achieve the desired additional effect of liraglutide. It is therefore recommended that adolescents with severe obesity take part in a lifestyle change programme of at least 6 months before supplementary medicinal treatment be considered.

In cases of severe obesity (isoBMI ≥ 40, or isoBMI ≥ 35 and < 40 with at least one weight-related comorbidity), individual reimbursements can be sought under the reimbursable prescription scheme (7).

The road ahead

Intensive lifestyle treatment for adolescent obesity has a limited effect on average, but there are large variations. A clinical study and our preliminary experience suggest that supplementary treatment with liraglutide 3.0 mg can yield good results in patients for whom lifestyle treatment alone was not sufficient. However, this requires lifestyle treatment to be continued and side effects to be closely monitored. Until general practitioners in Norway gain more experience in treating adolescent obesity, we suggest that any supplementary drug treatment should mainly be initiated at multidisciplinary specialised obesity clinics. Subsequent follow-up should take place in a collaboration between the GPs and specialists.

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