

Diabetes: A pressing issue for primary care

Obesity management is one of the biggest challenges facing primary care. It requires considerable time within a busy practice setting, demanding skills that the clinician may not have specialist training in, combined with a feeling that success may often be unlikely. If committed, it is unusual that the individual cannot lose weight and reap the associated health benefits, but maintenance of the weight lost is an issue and leaves many healthcare professionals feeling that this is a task with no solution.

A realistic approach to obesity management

Obesity therapy should be based on a comprehensive clinical assessment and review of both metabolic cardiovascular (CV) and locomotor risks. For some obese individuals, recognition, brief intervention and simple lifestyle advice may be all that is needed. For many, however, a more intensive programme is required, along with adequate long-term follow-up, to ensure that weight maintenance is sustained (Björvell and Rössner, 1992).

Both clinicians and obese individuals can have unrealistic expectations of weight reduction. When setting goals, it may not be necessary to aim for “ideal” weight but rather a goal of 5–10% weight reduction. A modest target may not only be attainable but will also yield a significant reduction in the risk of developing type 2 diabetes and CV problems (National Heart, Lung, and Blood Institute, 1998).

Complexities of coexistent obesity and type 2 diabetes

Obesity is strongly associated with type 2 diabetes and lipid disorders, which are both significant CV risk factors with other associated comorbidities.

The term “diabetes” reflects this close association between obesity and type 2 diabetes, and in a practical sense highlights the need for a unified approach to these two conditions. However, while obesity is estimated to account for 80% of the overall risk of developing type 2

diabetes (Wolf and Colditz, 1998), the condition is multifactorial in origin, and obesity is not the sole determinant. Indeed, 20–50% of those who are morbidly obese do not develop type 2 diabetes, while 20% people with type 2 diabetes do not fulfil the conventional criteria to be called obese (Chan et al, 1994). *Box 1* highlights common risk factors for type 2 diabetes.

The link between weight gain and type 2 diabetes, however, remains strong. It has been demonstrated that weight gain in adult life is significantly linked with high risk of type 2 diabetes and that weight loss of >5 kg can reduce the risk of type 2 diabetes by 50% (Colditz et al, 1995). The length of time that an individual is overweight has also been shown to be a significant influence, with the British Regional Heart Study showing that the longer a person is overweight, the higher their risk of developing type 2 diabetes (Wannamethee and Shaper, 1999). Furthermore, it has been found that central obesity is a powerful predictor of type 2 diabetes in both sexes. Although BMI is the dominant risk factor for type 2 diabetes, the condition is strongly correlated with waist circumference (Chan et al, 1994).

In both the US and Finnish Diabetes Prevention Programmes, weight loss was the most important



David Millar-Jones

GP with a Special Interest in Diabetes, Torfaen, Wales, and Welsh Representative on the Primary Care Diabetes Society.

Box 1. Common risk factors for developing type 2 diabetes.

- Family history of type 2 diabetes in first-degree relative.
- Non-caucasian ethnic origin (Shai et al, 2006).
- Obesity, especially central.
- Low birth weight (associated with adult obesity).
- Obesogenic lifestyle (Rana et al, 2007):
 - Over-consumption of energy-rich food and drink.
 - Reduced physical activity.
- High alcohol consumption.
- Smoking (Sawada et al, 2003).
- Gestational diabetes.
- Socioeconomic factors (Ko et al, 2001):
 - Low income and education level.

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determinant for reducing the risk of impaired glucose tolerance going on to develop diabetes (Kubaszek et al, 2003; Hamman et al, 2006).

The challenge in primary care

The importance of managing diabetes in a way that addresses both obesity and type 2 diabetes in unison is key. In primary care, this is highlighted through the common clinical characteristics of diabetes and the metabolic syndrome, such as pro-coagulant and pro-inflammatory changes in the blood (Van Gaal et al, 2006), endothelial dysfunction (Jiang et al, 1999), renal disease (Sarnak et al, 2003), fatty liver disease, polycystic ovarian syndrome (Dunaif, 1997) and sleep apnoea (Vgontzas et al, 2000), thereby highlighting the linkage between body weight, type 2 diabetes, CV disease (CVD) and renal impairment. (CVD remains the main cause of death among Caucasian people with type 2 diabetes, whereas non-caucasians are more likely to die from stroke or renal disease [Morrish et al, 2001].)

To successfully manage diabetes in primary care, we need to equip ourselves with essential tools, including:

- Staff, trained in obesity and diabetes care, involved with the running of the clinic. The training must include expertise in assessment, management and skills at dealing with the psychological issues.
- A recognised weight-management programme that deals with lifestyle and diet.
- Suitable equipment that is capable of accurate assessment.
- A clearly defined follow-up procedure.

New therapies for managing diabetes are in development, and bariatric surgery has proven successful when individuals are properly selected. However, pharmacotherapy is not a solution to all, and bariatric surgery is rationed due to locality and cost issues.

Conclusion

With diabetes affecting ever younger ages, the concern of an epidemic in cardiac, vascular and renal disease is very real, and will only increase the demands to be placed on the already limited NHS resources, particularly those within primary care. The emphasis now must be on addressing both diabetes and obesity in a systematic and complementary way, and not as two conditions

in isolation. From the primary care perspective, we must look to develop specialist diabetes clinics, fully equipped to manage this burgeoning problem, and to the future, by focusing our attention on reducing the development of ill health by dealing with the source of the problem: the obesogenic state. ■

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