17. DIABETES MELLITUS IN ADULTS

17.1 Contents

Related conditions considered in other chapters

17.2 Introduction

17.2.1 Diabetes mellitus is a common condition affecting about 2 per 1000 of those under 20 and 3 per cent of the adult population. However in those aged over 60 years up to 5% of the population may have this disease. It is treated by diet, oral hypoglycaemic drugs (which lower high blood sugar levels) or injections of insulin.

17.2.2 People with uncomplicated diabetes mellitus do not normally need help with personal care. They are taught to test their own urine and blood sugar and to inject their own insulin. In persons with uncomplicated disease adherence to a special diet does not give rise to a need for attention. However where there is visual impairment, severe learning disability, or dementia there will be a need for help with testing urine and blood, and for injecting insulin.

17.3 Care Needs

17.3.1 Loss of Vision and Diabetes Mellitus

People with diabetes mellitus may develop diabetic retinopathy (disease of the back of the eye where the image is formed) or cataract (opacities in the lens of the eye); in addition they may have severe loss of vision or colour appreciation from causes unrelated to the diabetes. If visual impairment results, then the needs will be similar to those of other visually impaired people. In addition testing of urine and blood will have to be performed by another person. When the person with insulin-dependent diabetes and impaired vision also requires insulin injections to be prepared and/or given by another person the attention required will need to be given several times throughout the day. The use of "pen" syringes should not affect this need for attention, because visual control is still necessary to avoid mis-alignment.

17.3.2 Co-existing Learning Disabilities or Impairment of Brain Function in People with Diabetes Mellitus

Persons with learning disabilities [see also Chapter 20] may not be able to undertake their own monitoring and administration of insulin. The demanding nature of insulin therapy may cause problems for persons with learning disabilities who may, otherwise, be able to cope with, for example, simple oral medication. A person with such learning disabilities may be able to hold down a simple job and cope adequately with day-to-day activities but be unable to manage the complexities of insulin therapy which requires careful monitoring, adjustment of dose and recognition of hypoglycaemic episodes. In the same way people with dementia [see Chapter 21] may also find the complexities of insulin therapy daunting and be unable to manage their own monitoring and insulin administration without the assistance of another person. In these circumstances where there is substantial impairment of normal brain function, whether this is due to learning disabilities or dementia, the level and frequency of attention required may be similar to that already described for persons with visual impairment [see para. 17.3.1].

17.4 Complications of Diabetes Mellitus

17.4.1 Although the prognosis for patients with diabetes mellitus has greatly improved, they are still at risk of a number of complications, which include diseases of the blood vessels to the heart, brain or legs [see Chapters 11, 12 and 13]; neuropathy (poorly functioning nerve pathways -Chapter 15.5) and kidney disorders. Attendance needs may arise in relation to these, each case being considered on its merits in relation to the attention required. Some people with diabetes may become depressed or resentful of their condition, and may find it difficult to co-operate fully with treatment.

17.5 Hypoglycaemia [low blood sugar levels].

17.5.1 Hypoglycaemia means an abnormally low blood sugar concentration. The manifestations of hypoglycaemia vary from one patient to another but tend to be the same with each reaction for the same person, which makes it more easily recognisable by those who suffer from these episodes. Mild, early symptoms and signs of a drop in blood sugar levels include sweating, pallor, shakiness, feelings of hunger and a feeling of apprehension. More advanced symptoms of faintness or dizziness, blurring of vision and uncoordinated movements occur with further falls in blood sugar levels. Rarely there may be confusion and eventual loss of consciousness. Hypoglycaemia is just one of the causes of loss of consciousness (coma) in diabetes. The other causes, the most common of which is known as ketoacidosis, whilst having very serious consequences, do not develop as rapidly as hypoglycaemia and should not normally lead to a need for continual supervision.

17.5.2 People with diabetes mellitus who are receiving insulin or certain oral hypoglycaemic drugs are liable to develop hypoglycaemia. They should be able to recognise the symptoms of hypoglycaemia during the day and take appropriate preventative action; such as taking a sugar solution, sweetened fruit juice, or some honey or sugar with a glass of water. However there are

some people with long-standing diabetes, often in the 40-60 years age group, with poor awareness of the onset of hypoglycaemia. These people may not be able to recognise an impending attack. Rarely the severity of a hypoglycaemic attack may require admission to hospital and/or the administration of a drug by injection which elevates the blood sugar level.

17.5.3 Prevention of hypoglycaemia during the night may uncommonly require the person to waken and take food or drink. The use of an alarm makes assistance from another person unnecessary. Even when there is some other disablement precluding the person getting food and drink, this may be left within reach by the bed usually making night attention unnecessary. However in those persons where there is evidence of a persisting lack of awareness of the onset of hypoglycaemia they may already be hypoglycaemic when a night alarm sounds and thus be unable to take appropriate action.

17.5.4 People with learning difficulties and diabetes mellitus who cannot recognise hypoglycaemic symptoms by day and take the necessary action, may require someone to supervise them by day depending upon the severity of the learning difficulties. Rarely such people may need to take food and drink at night, if so they may need attention in order to remind them to do so [see also para 17.3.2].

17.6 Further Evidence

17.6.1 When in some affected individuals, despite precautions, hypoglycaemic attacks resulting in coma or hospital admissions have occurred, a report from the consultant physician who looks after them may greatly assist in clarifying the severity and frequency of these episodes and whether there is a persisting lack of appreciation of the onset of hypoglycaemia, describing how they are managed and providing a prognosis.

17.6.2 The following factors are important in determining the severity and frequency of these episodes and the nature and extent of any danger arising from them:

(i) The level of danger arising from an attack is dependent on how low the blood sugar has become. However, any hypoglycaemic episode which severely impairs the level of consciousness may be potentially dangerous. The results of laboratory tests measuring the sugar level during attacks will therefore assist in evaluating the risk of danger.

(ii) If there is a history of hypoglycaemia:

(a) The frequency of attacks requiring admission to hospital or treatment by injection, by day and night.

(b) Whether or not these attacks can be avoided or prevented.

(c) Whether or not there is any warning of attacks, particularly

at night.

(d) Advice which has been given to the person to control these attacks.

17.7 Mobility Considerations

17.7.1 The ability to walk is not impaired in persons with uncomplicated diabetes mellitus. However, in some people with long-standing disease complicated by reduced blood flow in blood vessels narrowed by vascular disease [see Chapter 13] or in those with poorly functioning nerve pathways in the legs [see Chapter 15.5], walking may be restricted either by pain in the legs brought on by exercise or by weakness of leg muscles. In some cases amputation of one or both legs may have occurred and adjustment to artificial limbs may not always be successful. Diabetes may also give rise to kidney failure [see Chapter 23] in a substantial number of affected individuals. It is commonly associated with visual impairment and lower limb problems.