

CHAPTER 7

DIABETES IN THE ELDERLY

Author:

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7.1 Prevention of Diabetes

- Lifestyle interventions, including nutrition and exercise should be considered a therapeutic approach to prevent type 2 diabetes in elderly patients at risk.

7.2 Diagnosis of Diabetes

- The capacity to metabolize carbohydrate decreases with age. During oral glucose tolerance tests, blood glucose levels are higher in the healthy aged than in younger subjects but are still within the limits set for the latter.
- The diagnostic criteria for diabetes mellitus and impaired glucose tolerance are the same in the elderly as in younger people.
- Most elderly people with diabetes have Type 2 DM.

7.3 Management

- Nutrition and physical activity remain the initial management strategies, supplemented by oral antihyperglycemic agents and insulin if needed.
- The nutritional management of the elderly is essentially the same as that for younger individuals (see Chapter 3). Total calories should aim to achieve a desirable body weight. The diet should contain the appropriate distribution of fat, carbohydrate, fibre, protein and sodium and should be individualized to accommodate personal preferences, age, lifestyle, culture and readiness to change. Alcohol may be allowed in moderation, however patients should be advised of the risks of alcohol and the prevention of hypoglycemia.
- Aerobic or resistance exercise is recommended for elderly patients in whom it is not contraindicated.
- In many elderly patients, nutrition and physical activity alone may be insufficient to achieve metabolic control; one or more oral antihyperglycemic agents, combination therapy or insulin may be required.
- The same targets for glycemia, blood pressure and lipids apply to otherwise healthy elderly as to younger people with diabetes, however, in the presence of multiple co-morbidities, high levels of functional dependency or limited life expectancy, goals should be more conservative.
- The degree of blood glucose control should, however, be individualized.
- Symptoms of hyperglycemia and the occurrence of hypoglycemia should be prevented.
- Closer to normal glucose levels are associated with lower risk of complications in elderly people with type 2 diabetes.
- Evidence of microvascular or macrovascular disease should be sought at the time of diagnosis.

7.4 Pharmacologic Considerations

- Attention to management of Insulin Resistance Syndrome should be an integral part of management in the elderly using the same guidelines as for younger individuals, however special precaution is needed

when administering these certain groups of oral agents especially in the presence of renal, hepatic or cardiac disease.

- Oral antihyperglycemic agents may have significant drug interactions with other medications required by older patients.
- Drugs such as sulfonamides, non-steroidal anti-inflammatory agents and clofibrate may potentiate sulfonylurea action and cause hypoglycemia. Sulfonylureas potentiate the anticoagulant action of coumadin and the sedative action of barbiturates.
- The incidence of hypoglycemia associated with the use of sulfonylureas increases with age and appears to be higher with glyburide. Gliclazide and glimepiride are preferred choices, as they are associated with a lower incidence of hypoglycemia.
- Nonsulfonylurea insulin secretagogues may reduce the risk of hypoglycemia and are the preferred choice for elderly patients with irregular eating habits.
- Insulin therapy poses special concerns in some elderly patients. Issues with concentration and memory, failing eyesight and manual dexterity may lead to dosage errors. Use of insulin premixes, insulin pens or preloaded syringes should be considered to reduce these risks.
- Hypoglycemia can be extremely dangerous, especially in patients with concurrent coronary artery disease, and should be avoided.

References

1. Diabetes Mellitus in Elderly People. *Diabetes Care* 1990;13 (Suppl 2).
2. Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. Canadian Diabetes Association 2003 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. *Can J Diabetes* 2003;27(suppl 2): S106-107.