Glipizide: A Review of its Pharmacological Properties and Therapeutic Use

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Glibenclamide (Pfizer); Diaboral (Ciba); Minidiab (Carlo Erba).

Summary

Glibizide is a 'second generation' oral hypoglycaemic agent similar in potency to glibenclamide. It is completely absorbed after oral administration and has a rapid onset of action, but the duration of its hypoglycaemic effect is shorter than that of glibenclamide. It is rapidly metabolised to inactive metabolites which are excreted in the urine. Therapeutic trials have shown the efficacy of glibizide in maturity onset diabetes mellitus to be comparable with that of glibenclamide and chlorpropamide in newly diagnosed patients unresponsive to diet as well as in patients previously treated with oral hypoglycaemic drugs. Glibizide is well tolerated, but careful adjustment of dosage and attention to diet may be needed to avoid hypoglycaemic symptoms a few hours after a single daily dose.

Pharmacology: In animals, as well as in man, glibizide is at least 100 times more potent (weight for weight) than tolbutamide. Glibizide has a more rapid onset of action than glibenclamide when given orally or intravenously, but the duration of action of glibizide is shorter than that of glibenclamide. In healthy subjects and in diabetic patients a single dose of glibizide results in an increase in immunoreactive insulin (IRI) and a decrease in fasting blood glucose levels and similar changes in insulin and glucose after a glucose load or a standard meal. Studies in diabetic patients indicate that a single 5 to 10mg dose of glibizide given before breakfast may often control hyperglycaemia throughout the day. However, better control