Vildagliptin (Galvus)

Introduction

The natural history of type 2 diabetes is one of progressive beta cell failure. Most patients require increasing doses of oral hypoglycaemic agents eventually needing transfer to insulin treatment. The prospect of new oral agents which may help delay or prevent the need for insulin is an exciting new development in diabetes care.

What is Vildagliptin ?

Vildagliptin is the first of a new class of drugs for the treatment of Type 2 diabetes. This group of drugs will be known as DPP-IV (dipeptyl peptidase-IV) inhibitors.

How do these new drugs work ?

Vildagliptin reduces blood glucose concentrations by enhancing the effects of 'incretins'. These drugs are therefore also known as 'incretin enhancers'.

Incretins are hormones which are produced by the gut in response to food.

More about gut hormones…

When you have a meal various hormones (chemicals) are released by cells in the gut (bowel) wall. These hormones help stimulate the release of insulin by the pancreas. It has been shown that people with type 2 diabetes have an impaired 'incretin effect'.

The role of DPP-IV

Incretin hormones have a very short life-span in circulation - as they are rapidly destroyed by DPP-IV.

By opposing the action of DPP-IV, DPP-IV inhibitors help to prolong the incretin effect. This helps reduce blood glucose levels.

What are the potential benefits of Vildagliptin ?

- Sustained lowering of blood glucose
- Well tolerated - low rates of adverse effects in clinical trials
- Not associated with weight gain
- Oral administration

Are there other benefits beyond blood glucose lowering ?

It is known that people with type 2 diabetes have progressive loss of beta cell function. It is possible that Vildagliptin may help preserve pancreatic beta-cell function.

How is it administered ?

Vildagliptin is taken orally and is likely to be administered once daily.

When will this drug be available ?

Vildagliptin has been put forward for approval by the FDA and may be available for prescription in the United States later this year. The submission for approval in Europe is not expected until the end of 2006.

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