Exenatide (Byetta®) for diabetes

Conway and Denbighshire drug and therapeutics committee have endorsed the use of exenatide within the health economy. It is not suitable for initiation in primary care (at present) but the committee felt that it may be appropriate for GPs to continue the prescribing of exenatide.

**PHARMACOLOGY**

Exenatide mimics the hormone incretin which is released in the intestine and enhances the secretion of insulin in the presence of normal to high glucose concentrations. Glucagon production is also suppressed and gastric emptying is slowed.

**PATIENT SELECTION CRITERIA**

Exenatide may be used in patients with type 2 diabetes who have inadequate glycaemic control on metformin and a sulphonylurea (unless either are contra-indicated) and who cannot have other hypoglycaemic therapy because it is relatively contra-indicated.

NICE¹ suggest to consider adding exenatide to metformin and a sulphonylurea if:

- BMI ≥ 35 kg/m² in people of European descent and there are problems associated with high weight, or
- BMI < 35 kg/m² and insulin is unacceptable because of occupational implications or weight loss would benefit other comorbidities.

Any patient who has an eGFR < 30 mL/min/1.73m² and considered suitable for exenatide should be referred to the nephrologist to determine / exclude underlying renal disease and should be closely monitored in the secondary care service.

**INITIATION AND REVIEW**

Exenatide should be initiated in secondary care according to the pathway overleaf. During initiation, exenatide should be prescribed by secondary care, however **prescribing responsibility may be transferred to the GP**, if the patient is tolerating treatment after 7 weeks.

The patient will be reviewed by the secondary care team between 6-9 months and if there is a reduction of ≥ 1.0 percentage point in HbA₁c in 6 months and ≥ 3% of initial body weight in 6 months, the patient can continue treatment. Specialist care would continue to manage those on both insulin and exenatide and complex patients.

**DOSAGE**

The starting dose is 5 microgram twice daily, given within one hour before the morning and evening meal. After one month the dose can be increased to 10 micrograms twice daily.

**CONTRAINDICATIONS**

- Renal impairment, eGFR< 30 mL/min/1.73m²
- Severe gastrointestinal disease
- Pregnancy
- Breast feeding

**ADVERSE EFFECTS**

- Hypoglycaemia (if prescribed alongside a sulphonylurea, reduce sulphonylurea dose initially).
- Nausea (dose dependent and reduces with continued use).
- Rashes and hypersensitivity
- Acute pancreatitis. Inform patient of symptoms: persistent, severe abdominal pain and if suspected, **stop drug immediately**.

**INTERACTIONS**

Exenatide may slow gastric emptying and reduce the extent and rate of absorption of oral medicines.

- Some oral medicines e.g. PPIs should be taken at least 1 hour before or 4 hours after the exenatide injection
- Use with caution with drugs of a narrow therapeutic index or those requiring rapid gastrointestinal absorption.
PATHWAY FOR INITIATING EXENATIDE

Patient identified as possible candidate for exenatide

Consultation with diabetologist and suitability confirmed

Week 0
Group appointment with diabetes specialist nurse (DSN) to initiate Exenatide 5 microgram twice daily. Prescription for 4 weeks supply issued by DSN.

Week 3
Telephone consultation with DSN to discuss progress

Week 4
Dose of exenatide increased to 10microgram twice daily (if appropriate) by DSN. Prescription for 4 weeks supply issued by DSN.

Week 7
Telephone consultation with DSN to discuss progress.
If exenatide is tolerated, DSN will contact GP and ask primary care to continue prescribing.
Complex patients and those also prescribed insulin will remain under the care of Secondary Care

Week 26 - 39
Out Patient Department (OPD) appointment with diabetologist to assess progress and metabolic response monitored according to NICE criteria

NICE criteria fulfilled
Discharged to primary care and GP asked to continue to prescribe

NICE criteria not fulfilled
Complex patients and those prescribed with insulin managed by secondary care
Exenatide stopped
Referred back to DSN for further management

References
1. NICE Clinical Guideline 87. Type 2 Diabetes: the management of type 2 diabetes. May 2009
2. Summary of product characteristics: Byetta (exenatide) accessed via www.medicines.org.uk on 26/01/10

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For further information or advice, the GP should visit www.medicines.org.uk