Treatment algorithm for sub-optimal glycaemic control in Type 2 diabetes

HbA1c >7.5% on two oral hypoglycaemic agents

Features of insulin deficiency?
- ketonuria
- progressive unexplained weight loss
- BMI<25 kg/m²

yes
Initiate subcutaneous insulin therapy

no
Add in third oral hypoglycaemic agent

Glycaemic control still >7.5% on maximum tolerated doses of OHA’s?

no
Routine clinic review

yes
BMI > 30 kg/m²

no
Initiate subcutaneous insulin therapy*

yes
Consider exenatide – 5 micrograms twice daily, increasing to 10 micrograms twice daily after 4 weeks if no adverse effects.
Glitazone therapy should be discontinued prior to initiation of exenatide

Review HbA1c after 4-6 months and discontinue exenatide if no significant reduction. Replace with insulin therapy

Remember – at all stages, dietary advice should be reinforced and weight loss encouraged. Insulin therapy may be considered earlier in the algorithm in certain circumstances e.g. in younger patients.

Exenatide is not indicated in the following circumstances:
- Type 1 diabetes
- Type 2 diabetes with features of insulin deficiency
- Significant renal impairment (creatinine clearance <30ml/min)
- Pregnancy and during breast feeding
- Children <18 years of age
- Severe gastrointestinal disease including gastroparesis

Exenatide should be used with caution in adults older than 70 years and if creatinine clearance 30-50ml/min.

*Some patients with BMI < 30 kg/m² may also be appropriate for exenatide, for example if there are concerns regarding vocational driving and employment if insulin therapy were initiated.

Exenatide is licensed for use with metformin and/or sulphonylurea therapy. Hypoglycaemia can occur when used in combination with a sulphonylurea and so reduction in dose of the latter may be required. Main adverse effect is nausea and vomiting.