New Medicine Position Statement

Biosimilars of insulin glargine 100 units/mL (Lantus®)

For the treatment of type 1 and type 2 diabetes mellitus

Recommendation: Green

Biosimilars of insulin glargine 100 units/mL (Lantus®) are recommended for use in patients with type 1 and type 2 diabetes mellitus (T1DM & T2DM).

Long acting insulin analogues, including biosimilars of insulin glargine 100 units/mL, should be prescribed in accordance with current NICE guidance for T1DM and T2DM.

The prescribing of biosimilar preparations should be by **brand name**, followed by the concentration and recommended daily dose in units and a statement of the formulation. The provision of the NPSA or other locally approved insulin passport is also recommended.[1]

NICE's biosimilars position statement states that NICE guidance on a product is likely to also apply to a relevant licensed biosimilar product which subsequently appears on the market.[2]

The initiation of biosimilar insulins should be in NEW patients or patients assessed to need a medication change, with close monitoring of their blood glucose to ensure good control is achieved.

Background:

Biosimilars are biological medicines which are highly similar and clinically equivalent to an existing biological medicine licensed for use. They have been shown to not have any clinically meaningful differences from the originator biological medicine in terms of quality, safety and efficacy. They are not considered generic equivalents to their originator biological medicine because the two products are similar but not identical.[3]

The regulatory requirements for the approval of a biosimilar are considerably greater than those for a generic drug through a much more comprehensive analysis. In 2003, the EU adopted a specific pathway that provides a robust regulatory process through overarching quality, non-clinical, clinical and product class-specific scientific guidelines for biosimilar medicines. The guiding principle is not to necessarily establish patient benefit, which will have been shown for the reference product, but to demonstrate high similarity to the reference product. This comparability exercise, which is a head-to-head comparison of the biosimilar with the reference product, is to ensure a close resemblance in terms of quality, physical chemistry, biological characteristics, safety and efficacy. The comparability exercise is to demonstrate that the degree of variability is not significant.[3,4]

All biologicals may exhibit batch to batch variability which is controlled and maintained within defined approved limits. Manufacturing changes can occur in both originator and biosimilar medicines. These changes are evaluated by the regulator to ensure that they do not impact on quality, safety or efficacy. The scientific basis for this regulatory pathway is the same as that used for the manufacturing changes.[3]

Depending on the evidence provided for regulatory assessment of the biosimilar medicine, it will typically have the therapeutic indications established by the reference medicine. Although there may not be comparative clinical data (phase III studies) in all of these indications for the biosimilar, the data package submitted when considered in totality will provide sufficient assurance for the EMA to allow extrapolation of the biosimilarity assessment to additional indications. Extrapolation is not automatically awarded to a biosimilar, but must be scientifically justified. Once a product has been authorised as a biosimilar by regulators, it should be considered by the prescriber as therapeutically equivalent in authorised indications.[3]

Once authorised by the European Commission, biosimilars are subject to the same level of post authorisation regulatory scrutiny as originator (reference) product and will pursue their own development and manufacturing

changes as any other biological medicine.[3]

Abasaglar® (a biosimilar of Lantus®) specific information:

The first biosimilar version of insulin glargine (Abasaglar®) was launched in the UK in September 2015. It is licensed identically to the originator product (Lantus®) for use in the treatment of T1DM and T2DM in adults, adolescents and children 2 years and above.[5]

The yearly cost of Abasaglar® is approximately 15% lower than Lantus; at £343 per patient per year, compared with £403 per patient per year for Lantus (assuming 40 units per day for each treatment).[6]

UKMi has produced an In-use Product Safety Assessment which summarises the safety considerations associated with the introduction of Abasaglar®. This states that substitution and automatic switching from Lantus® to Abasaglar® cannot be undertaken and would counter the MHRA's recommendation that all biological medicines are prescribed by brand name. Any switching from Lantus® to Abasaglar® would require a managed approach with blood glucose monitoring, since dosage adjustment could theoretically be required.[2]

NB. Abasaglar® KwikPen and cartridge are labelled with the unit sign "u", this is not consistent with national recommendations to use the term "units" in all contexts for insulin preparations. The use of the abbreviated symbol on products could potentially increase the risk of prescribing transcription errors; the tenfold dose error that could result would be a "never event". Also the packaging and insert for the Abasaglar® cartridge product does not state which pen device the cartridge should be inserted into. Confusion around this could potentially lead to incorrect selection of devices and improper delivery of the insulin dose. All known current risks associated with Lantus® will apply to Abasaglar®. Abasaglar® is subject to additional monitoring, as indicated by the black triangle symbol for new medicines; the EMA Risk Management Plan summarises safety concerns including: low blood sugar, immediate allergic reactions, reaction at injection site, malignancies, immunogenicity.[2] Although there are some differences in the excipients used in the formulation of the biosimilar (zinc oxide replaces zinc chloride; 100% glycerol vs. 85% in Lantus) the final quantitative formulation is the same as that of Lantus®.[5,7]

References:

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3. NHS England, Medical Directorate. What is a biosimilar medicine? Publication Gateway Reference: 03923. 24th September 2015.
4. European medicines agency. Guideline on similar biological medicinal products. CHMP/437/04 Rev 1. 23 October 2014. http://www.ema.europa.eu/docs/en_GB/document_library/Scientific_guideline/2014/10/WC500176768.pdf
5. Summary Product Characteristics: Abasaglar 100 units/mL solution for injection in cartridge & pre-filled pen (Eli Lilly). Accessed 16th November 2015 at http://www.medicines.org.uk/emc/medicine/30494
6. Haymarket Medical Media. Monthly Index of Medical Specialities (Mims). http://www.mims.co.uk/ (accessed 16th November 2015).
7. Summary Product Characteristics: Lantus 100 units/ml solution for injection in SoloStar pre-filled pen (Sanofi). Accessed 26th November 2015 at http://www.medicines.org.uk/emc/medicine/20123

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