**6.4: Parenteral iron**

Oral iron is the preferred, and safest, first-line therapy for most patients with iron deficiency anaemia but many users experience gastrointestinal side effects and compliance with treatment is poor. In patients receiving ESA, oral iron replacement is often inadequate and ‘functional iron deficiency’ limits the response to treatment. Parenteral iron produces more rapid responses and better repletion of iron stores in several clinical settings but, until recently, its use was limited by a significant risk of severe, occasionally fatal, allergic reactions with the available preparations (especially high molecular weight iron dextran). The currently available preparations have a very low incidence of serious reactions and have brought parenteral iron back into mainstream practice. Common indications for the use of intravenous iron include:

- Iron deficiency anaemia with intolerance of oral iron, especially in inflammatory bowel disease, or where oral iron is ineffective.
- To support the use of erythropoiesis stimulating agents (including patients on renal dialysis).
- As an alternative to blood transfusion when a rapid increase in Hb is required (e.g. perioperative anaemia, severe anaemia in late pregnancy or postpartum anaemia).

Several parenteral iron preparations are now licensed in the UK. Some, such as iron sucrose (Venofer®), are given up to three times weekly by slow intravenous injection or short infusion and may need several weeks of treatment for a full replacement dose to be administered. Others, such as low molecular weight iron dextrans (Cosmofer®), may be given as a single total dose infusion over several hours. More recently introduced agents, such as ferric carboxymaltose (Ferinject®) or iron isomaltoside (Monofer®) have the advantage of administering large replacement doses more rapidly (15 to 60 minutes).

The newer preparations are more expensive and clinical experience is still limited. Parenteral iron is contraindicated in the first trimester of pregnancy. The availability of individual parenteral iron preparations varies between hospitals and they should be used according to local guidelines and policies. Detailed information about dose and administration is available in the individual Summary of Product Characteristics and the British National Formulary (http://bnf.org/bnf).