

RGH Pharmacy E-Bulletin

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A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

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Parenteral iron preparations and iron deficiency anaemia

Iron deficiency is a common cause of anaemia, and oral iron (100 - 200 mg elemental iron/day) is regarded as first line therapy. Parenteral iron is indicated for patients with iron deficiency anaemia (IDA) where there is intolerance (adverse effects and/or demonstrated non-compliance), poor absorption or lack of response to oral iron, ongoing iron losses exceeding absorption or when a more rapid increase in haemoglobin (Hb) is clinically important to prevent decompensation or transfusion. Intravenous (IV) administration is the preferred route and current formulations can be safely administered in outpatient infusion centres. Intramuscular (IM) administration is discouraged as it is painful and can result in permanent scarring and skin discolouration. In adults with IDA, the total iron deficit (calculated using the Ganzoni formula using Hb and lean body weight) is typically 1200 - 2000 mg.

Three IV iron preparations are available in Australia, each with similar names: Iron Polymaltose (Ferrum-H®, Ferrosig®); Ferric Carboxymaltose (Ferinject®) and Iron Sucrose (Venofer®). Importantly, infusion rates and maximum dose per infusion of each preparation are vastly different and are NOT interchangeable.

Iron polymaltose

This product can be infused in large doses (including total dose infusion \leq 2500 mg) over 5 ½ hours. Whilst there is clinical experience with administering smaller doses at an accelerated rate, there is less experience with accelerated administration rates for large doses or total dose infusions and limited published data. Accelerated infusion rates of iron polymaltose may result in increased infusion-related reactions.

Iron sucrose

This product is not licensed in Australia for IDA; however, it is licensed for treatment of IDA in Europe and has a well-documented safety profile. 'Off label' use may involve small individual doses (100 - 200 mg), thereby requiring repeat infusions over weeks to replace the total iron deficit. Iron sucrose may be useful in patients with hypersensitivity reactions to iron polymaltose and when parenteral iron is indicated during pregnancy. Iron sucrose cannot be given IM.

Iron carboxymaltose

This product can be administered as 15 mg/kg/week lean body weight to a maximum of 1000 mg (if weight > 67 kg), infused over 15 minutes. For many patients, a subsequent dose of up to 1000 mg can be repeated (\geq one week later) to make up the total calculated iron deficit, or if used to achieve a rapid Hb response, the remaining iron deficit can be replaced with oral iron. Patients allergic to iron polymaltose SHOULD NOT receive iron carboxymaltose as the incidence of cross reactivity is unknown. In this circumstance specialist advice is recommended regarding the use of iron sucrose. Iron carboxymaltose cannot be given IM.

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FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
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