

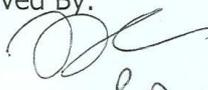
Beaumont Hospital  
Department of Transplantation, Urology and Nephrology



Guideline for administering Intravenous Ferinject in the Renal Unit

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Review Date: October 2013
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# Guideline for administering Intravenous Ferinject

## Beaumont Hospital Department of Transplantation, Urology and Nephrology



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## SECTION 1

### INTRODUCTION –

- **Rationale (Why):** This policy is to guide the renal multidisciplinary team in administering a cumulative dose of Ferinject in the management of iron deficiency anaemia.
- **Scope (When, Where and Who):** This guideline applies to all nursing and medical staff working within the Renal Directorate. It is intended as a guide towards best practice for all members of the multidisciplinary team involved in the management of anaemia in chronic renal failure. The Policy also covers the expanded role of the registered nurse to administer first and subsequent doses of intravenous iron ferinject through peripheral and central access on the provision that education has been given and it is within the scope of practice of each individual.

Responsibilities for each discipline involved are outlined as follows:

The nurse should:

- Maximise patient comfort and safety
- Record patients' observations, blood pressure and pulse pre and post administration of Ferinject.
- Partake in the venepuncture and cannulation programme and be deemed competent.
- Observe, report and record any complications to medical team, arising from all aspects of administering Ferinject
- Administer first dose and observe for adverse reaction(s) as per hospital IV drug administration guidelines (May 2011). The first dose is valid for a period of 2 years for outpatients.

## Guideline for administering Intravenous Ferinject

The Renal Medical team should:

- Maximise patient comfort and safety.
- Prescribe the dose of Ferinject to be administered as per the guidelines.
- Liaise with the Renal Nursing team in the management of renal anaemia.
- Effectively manage complications that may occur as per the guidelines.
- **Definition:** Intravenous iron Ferinject solution for infusion contains iron in a stable ferric state as a complex with a carbohydrate polymer designed to release utilisable iron to the iron transport and storage proteins in the body (ferritin and transferrin).

### SECTION 2

Intravenous Ferinject is prescribed by a medical doctor, administered by a registered nurse in a safe manner.

Nursing and Medical staff within the unit work in collaboration in the management of renal anaemia for a specified group of patients.

Aim for Hb level 11g/dl in non-diabetic patients

Aim for Hb level 11g/dl in diabetic patients and those with significant LVF

Ferritin >200-500

TSAT >20%

Hypo RBC <6%

CRP <10 (If elevated look for signs of infection or inflammation)

(KDOQI (2006) and EBPG (2004) Guidelines)

### SECTION 3

#### THE PROCEDURE

##### Equipment required for administration of Ferinject

Ferinject<sup>®</sup> (available in 50mg/ml vials in Beaumont Hospital)

1 x sterets to wipe skin, gauze squares

1 x 21 gauge butterfly or 22 gauge (blue) cannula

Tape or cannula dressing

2 x green needles

2 x 5ml syringe

1 x 10ml or 20 ml syringe

5mls x 2 Normal Saline 0.9%

Vacutainer blood bottles (if required)

Bag of normal saline 0.9% (100ml or 250ml) depending on prescribed dose.

## Guideline for administering Intravenous Ferinject

Take blood samples: Baseline: FBC, Ferritin, Serum folate, B12, CRP, Renal and Liver function (this may have been done in recent clinic appointment)

- Baseline observations: temperature, pulse and blood pressure
- Prepare skin with alcohol steret
- Insert either a 21 gauge butterfly, or 22 gauge (blue) Cannula
- Secure cannula in position with tape or cannula dressing
- Flush with 5mls Normal Saline
- Administer Ferinject via infusion / bolus dose injection
- Observe patient for any adverse events
- Flush cannula/ butterfly with 5mls Normal Saline post administration
- Remove cannula, apply pressure, extend and elevate the arm
- Post injection observations: Monitor pulse and blood pressure

### Dose Calculation

The dose of Ferinject<sup>®</sup> is calculated based on patient's body weight and haemoglobin deficit.

#### *Calculation of the cumulative dose*

The adequate cumulative dose of Ferinject<sup>®</sup> must be calculated for each patient individually and must not be exceeded. For overweight patients, a normal body weight/blood volume relation should be assumed when determining the iron requirement. The dose of Ferinject<sup>®</sup> is expressed in mg of elemental iron.

The cumulative dose required for Hb restoration and repletion of iron stores is calculated by the following formula:

**Dose [mg] =**

**{body weight [kg] x (target Hb - actual Hb) [g/dl] x 2.4} + iron storage depot [mg]**

*Depot iron for body weight below 35 kg = 15 mg/kg body weight.*

*Depot iron for body weight 35 kg and above = 500 mg.*

For patients < 66 kg: the calculated cumulative dose is to be rounded down to the nearest 100 mg.

For patients > 66 kg: the calculated cumulative dose is to be rounded up to the nearest 100 mg.

Example calculation for 60kg patient with Hb = 10g/dL and aiming for a target of 12.5g/dL

$[ 60 \times (12.5 - 10) \times 2.4 ] + 500\text{mg} = 860\text{mg}$  rounded to 800mg

## Guideline for administering Intravenous Ferinject

### A single dose must not exceed 15mg/kg

Body weight	Max single dose
35-39kg	500mg
40-46kg	600mg
47-53kg	700mg
54-59kg	800mg
60-66kg	900mg
>66kg	1000mg

Vial sizes are 100mg and 500mg

A dose of 100mg or 200mg can be given as a bolus injection. If such a dose is required, Venofer<sup>®</sup> should be considered as a more cost-effective option.

A dose of 300mg or 400mg should be diluted in 100mL 0.9% sodium chloride and infused over at least 6 minutes.

A dose of 500mg to 1000mg should be diluted in 250mL 0.9% sodium chloride and infused over at least 15 minutes.

#### **Undesirable effects:**

Headache is the most commonly reported Adverse Drug Reaction (affecting approx 3% of patients), followed by dizziness, hypotension and flushing.

#### **Contra-indications:**

Ferinject should not be used during the first trimester of pregnancy.

#### **Warnings and precautions:**

Parentally administered iron preparations can cause hypersensitivity reactions. Therefore facilities for cardio-pulmonary resuscitation must be available.

Care must be taken to prevent paravenous leakage. In case of paravenous leakage the administration of Ferinject must be stopped immediately.

Caution should be used when administering intravenous iron to Patients with a history of asthma, eczema or other atopic allergy or acute/ chronic infection.

Ferinject should not be administered concomitantly with oral preparations of iron as the absorption of iron will be reduced.

# Guideline for administering Intravenous Ferinject

## SECTION 4

### **DEVELOPMENT AND CONSULTATION PROCESS – Consisting of:**

Original Policy developed in May 2009 by:

Louise Kelly CNM1 Renal Day Care  
Martin Ferguson Pharmacist

Policy under review by:

Louise Kelly CNM1 Renal Day Care  
Lorraine Hanratty CNM2 Vascular Access  
Martin Ferguson Pharmacist

<b>CONSULTANT SUMMARY</b>	
Date PPPG issued for consultation	
Number of versions produced for consultation	
Committees/meetings where PPPG was formally discussed	Dates:

<b>Where Received</b>	<b>Summary of Feedback</b>	<b>Actions/Response</b>

## SECTION 5

### **REFERENCE DOCUMENTS – Consisting of:**

A list of works that the author has used as a source of information, evidence or inspiration

Ferinject summary of Product Characteristics

KDOQI (2006) Clinical Practice Guidelines and Clinical Practice Recommendations for Anaemia in Chronic Kidney Disease, American Journal of Kidney Disease, Vol 47, Suppl 3.

European Best Practice Guidelines for the management of anaemia in patients with Chronic Renal Failure (2004) , Nephrology Dialysis Transplantation, Vol 19, May, Suppl 2.

## Guideline for administering Intravenous Ferinject

Beaumont Hospital (2011) Policy and Clinical Guidelines on the administration of intravenous therapies/medicines

An Bord Altranais (2000) Scope of Nursing Practice and Midwifery Practice Framework. An Bord Altranais, Dublin.