17-01-2023
5th Copy

ELINJEC® Injection

(Ferric Carboxymaltose)

For I.V. use only

QUALITATIVE AND QUANTITATIVE COMPOSITION

ELINJEC® Injection 500mg/10ml
Each 10ml contains:
Ferric Carboxymaltose MS equivalent to
Elemental Iron..... 500mg

PHARMACEUTICAL FORM

Solution for Injection / Infusion

CLINICAL PARTICULARS

THERAPEUTIC INDICATIONS:

ELINJEC® is indicated for the treatment of iron deficiency when:

- Oral iron preparations are ineffective.
- Oral iron preparations cannot be used.
- There is a clinical need to deliver iron rapidly.

The diagnosis of iron deficiency must be based on laboratory tests.

POSOLOGY AND METHOD OF ADMINISTRATION:

Posology: The posology of **ELINJEC®** follows a stepwise approach:
Step 1: Determination of the iron need: The individual iron need for repletion using **ELINJEC®** is determined based on the patient's body weight and haemoglobin (Hb) level.
Refer to below table for determination of the iron need:

Table: Determination of Iron need:

Hb		Patient body weight		
g/dL	mmol/L	below 35kg	35kg to <70kg	70kg and above
<10	<6.2	500mg	1,500mg	2,000mg
10 to <14	6.2 to <8.7	500mg	1,000mg	1,500mg
≥14	≥8.7	500mg	500mg	500mg

Iron deficiency must be confirmed by laboratory tests.

Step 2: Calculation and administration of the maximum individual iron dose(s): Based on the iron need determined above the appropriate dose(s) of **ELINJEC®** should be administered taking into consideration the following:

A single* ELINJEC® *administration should not exceed:

- 15mg iron/kg body weight (for administration by intravenous injection) or 20mg iron/kg body weight (for administration by intravenous infusion).
- The maximum recommended cumulative dose of **ELINJEC®** is 1,000mg of iron (20mL **ELINJEC®**) per week.

Step 3: Post-iron repletion assessments:

- Re-assessment should be performed by the clinician based on the individual patient's condition.
- The Hb level should be re-assessed no earlier than 4 weeks post final **ELINJEC®** administration to allow adequate time for erythropoiesis and iron utilization.
- In the event the patient requires further iron repletion, the iron need should be recalculated.

Special Population–patients with haemodialysis-dependent chronic kidney disease: A single maximum daily dose of 200mg iron should not be exceeded in haemodialysis-dependent chronic kidney disease patients.

Paediatric population: The use of **ELINJEC®** has not been studied in children, and therefore, is not recommended in children under 14 years.

Method of administration: ELINJEC® must only be administered by the intravenous route:

- By injection or by infusion, or;
- During a haemodialysis session undiluted directly into the venous limb of the dialyzer.

ELINJEC® must not be administered by the subcutaneous or intramuscular route.

Intravenous injection: **ELINJEC®** may be administered by intravenous injection using undiluted solution. The maximum single dose is 15mg iron/kg body weight but should not exceed 1,000mg iron.

***Administration rates for intravenous injection of* ELINJEC®.**

Volume of **ELINJEC®** required	Equivalent iron dose	Administration rate / Minimum administration time
2 to 4mL	100 to 200mg	No minimal prescribed time
>4 to 10mL	>200 to 500mg	100mg iron / min
>10 to 20mL	>500 to 1,000mg	15 minutes

Intravenous infusion:

- **ELINJEC®** may be administered by intravenous infusion, in which case it must be diluted.
- The maximum single dose is 20mg iron/kg body weight, but should not exceed 1,000mg iron.
- For infusion, **ELINJEC®** must only be diluted in sterile 0.9% m/V sodium chloride solution as shown in below table.

Note: For stability reasons, **ELINJEC®** should not be diluted to concentrations less than 2mg iron/mL (not including the volume of the ferric carboxymaltose solution). For further instructions on dilution of the medicinal product before administration, refer below table.

Dilution plan of* ELINJEC® *for intravenous infusion.

Volume of **ELINJEC®** required	Equivalent iron dose	Maximum amount of sterile 0.9% m/V sodium chloride solution	Minimum administration time
2 to 4mL	100 to 200mg	50mL	No minimal prescribed time
>4 to 10mL	>200 to 500mg	100mL	6 minutes
>10 to 20mL	>500 to 1,000mg	250mL	15 minutes

CONTRAINDICATIONS:
Contraindicated in cases of:

- Hypersensitivity to the active substance.
- Known serious hypersensitivity to other parenteral iron products.
- Anaemia not attributed to iron deficiency, e.g. other microcytic anaemia.
- Evidence of iron overload or disturbances in the utilisation of iron.

SPECIAL WARNINGS AND PRECAUTIONS FOR USE:
Hypersensitivity reactions: Parenterally administered iron preparations can cause hypersensitivity reactions including serious and potentially fatal anaphylactic/anaphylactoid reactions. There are known reports of hypersensitivity reactions which progressed to Kounis syndrome (acute allergic coronary arteriospasm that can result in myocardial infarction). The risk is enhanced for patients with known allergies including drug allergies, including patients with a history of severe asthma, eczema or another atopic allergy. There is also an increased risk of hypersensitivity reactions to parenteral iron complexes in patients with immune or inflammatory conditions (e.g systemic lupus erythematosus, rheumatoid arthritis). Ferric carboxymaltose injection should only be administered when staff trained to evaluate and manage anaphylactic reactions are immediately available. Each patient should be observed for adverse effects for at least 30 minutes following each ferric carboxymaltose injection administration.

210mm

120mm

17-01-2023
5th Copy

210mm

If hypersensitivity reactions or signs of intolerance occur during administration, the treatment must be stopped immediately and consult the doctor immediately.
Hypophosphataemic osteomalacia: Symptomatic hypophosphataemia leading to osteomalacia and fractures requiring clinical intervention including surgery are known to be reported in the post marketing setting. Patients should be asked to seek medical advice if they experience worsening fatigue with myalgias or bone pain. Serum phosphate should be monitored in patients who receive multiple administrations at higher doses or long-term treatment, and those with existing risk factors for hypophosphataemia. In case of persisting hypophosphataemia, treatment with ferric carboxymaltose should be re-evaluated.
Hepatic or renal impairment: In patients with liver dysfunction, parenteral iron should only be administered after careful benefit/risk assessment. Parenteral iron administration should be avoided in patients with hepatic dysfunction where iron overload is a precipitating factor, in particular Porphyria Cutanea Tarda (PCT).
Careful monitoring of iron status is recommended to avoid iron overload. No safety data on haemodialysis-dependent chronic kidney disease patients receiving single doses of more than 200mg iron are available.
Infection: Parenteral iron must be used with caution in case of acute or chronic infection, asthma, eczema or atopic allergies.
It is recommended that the treatment with ferric carboxymaltose injection is stopped in patients with ongoing bacteraemia. Therefore, in patients with chronic infection a benefit/risk evaluation has to be performed, taking into account the suppression of erythropoiesis.
Extravasation: Caution should be exercised to avoid paravenous leakage when administering ferric carboxymaltose injection.
Paravenous leakage of ferric carboxymaltose injection at the administration site may lead to irritation of the skin and potentially long lasting brown discolouration at the site of administration. In case of paravenous leakage, the administration of ferric carboxymaltose injection must be stopped immediately.
Sodium: Iron carboxymaltose injection contains up to 5.5mg (0.24mmol) sodium per mL of undiluted solution, equivalent to 0.3% of the WHO recommended maximum daily intake of 2g sodium for an adult.
Paediatric population: The use of ferric carboxymaltose injection has not been studied in children.

INTERACTION WITH OTHER MEDICINAL PRODUCTS AND OTHER FORMS OF INTERACTION:
The absorption of oral iron is reduced when administered concomitantly with parenteral iron preparations. Therefore, if required, oral iron therapy should not be started for at least 5 days after the last administration of ferric carboxymaltose injection.

FERTILITY, PREGNANCY AND LACTATION:
Pregnancy: There are limited data from the use of ferric carboxymaltose injection in pregnant women. A careful benefit/risk evaluation is required before use during pregnancy and ferric carboxymaltose injection should not be used during pregnancy unless clearly necessary. Iron deficiency occurring in the first trimester of pregnancy can in many cases be treated with oral iron. Treatment with ferric carboxymaltose injection should be confined to the second and third trimester if the benefit is judged to outweigh the potential risk for both the mother and the foetus. Foetal bradycardia may occur following administration of parenteral irons. It is usually transient and a consequence of a hypersensitivity reaction in the mother. The unborn baby should be carefully monitored during intravenous administration of parenteral irons to pregnant women.
Breast-feeding: Clinical studies showed that transfer of iron from ferric carboxymaltose injection to human milk was negligible (≤1%). Based on limited data on breast-feeding women it is unlikely that ferric carboxymaltose injection represents a risk to the breast-fed child.
Fertility: There are no data on the effect of ferric carboxymaltose injection on human fertility. Fertility was unaffected following ferric carboxymaltose injection treatment in animal studies.

EFFECTS ON ABILITY TO DRIVE AND USE MACHINES:
Ferric carboxymaltose injection is unlikely to impair the ability to drive and use machines.

UNDESIRABLE EFFECTS:
The most commonly reported adverse drug reactions (ADR) is nausea, followed by injection/infusion site reactions, hypophosphataemia, headache, flushing, dizziness and hypertension.
Injection/infusion site reactions comprise several ADRs which individually are either uncommon or rare. The most serious ADR is anaphylactoid/anaphylactic reactions (rare); fatalities are known to be reported.
Common: Hypophosphataemia, headache, dizziness, flushing, hypertension, nausea, injection/infusion site reactions*.
Uncommon: Hypersensitivity, paraesthesia, dysgeusia, tachycardia, hypotension, dyspnoea, vomiting, dyspepsia, abdominal pain, constipation, diarrhoea, pruritus, urticaria, erythema, rash**, myalgia, back pain, arthralgia, pain in extremity, muscle spasm, pyrexia, fatigue, chest pain, oedema peripheral, chills, alanine aminotransferase increased, aspartate aminotransferase increased, gamma-glutamyl transferase increased, blood lactate dehydrogenase increased, blood alkaline phosphatase increased.
Rare: Anaphylactoid/anaphylactic reactions, anxiety, phlebitis, syncope, presyncope, bronchospasm, flatulence, angioedema, pallor, distant skin discolouration, malaise, influenza like illness (whose onset may vary from a few hours to several days).
Frequency not known: Loss of consciousness, Kounis syndrome, face oedema, hypophosphataemic osteomalacia.
*Includes the following preferred terms: Rash (individual ADR determined to be uncommon) and rash erythematous, generalised, -macular, -maculo-papular, pruritic (all individual ADRs determined to be rare).
**Includes, but is not limited to, the following preferred terms: Injection/infusion site-pain, haematoma, discolouration, extravasation, irritation, reaction, (all individual ADRs determined to be uncommon) and paraesthesia (individual ADR determined to be rare).

PHARMACOLOGICAL PROPERTIES
PHARMACODYNAMIC PROPERTIES:
Pharmacotherapeutic Group: Iron trivalent, parenteral preparation, **ATC code:** B03AC.
Ferric carboxymaltose injection/infusion is a colloidal solution of the iron complex ferric carboxymaltose.
The complex is designed to provide, in a controlled way, utilisable iron for the iron transport and storage proteins in the body (transferrin and ferritin, respectively).
Red cell utilisation of ^{59}Fe from radio-labelled ferric carboxymaltose injection ranged from 91% to 99% in subjects with iron deficiency (ID) and 61% to 84% in subjects with renal anaemia at 24 days post-dose.
Ferric carboxymaltose injection treatment results in an increase in reticulocyte count, serum ferritin levels and TSAT levels to within normal ranges.

PHARMACOKINETIC PROPERTIES:
Distribution: Positron emission tomography demonstrated that ^{59}Fe and ^{52}Fe from ferric carboxymaltose injection was rapidly eliminated from the blood, transferred to the bone marrow, and deposited in the liver and spleen.
After administration of a single dose of ferric carboxymaltose injection of 100 to 1,000mg of iron in ID subjects, maximum total serum iron levels of 37µg/mL up to 333µg/mL are obtained after 15 minutes to 1.21 hours respectively. The volume of the central compartment corresponds well to the volume of the plasma (approximately 3 litres).
Elimination: The iron injected or infused was rapidly cleared from the plasma, the terminal half-life ranged from 7 to 12 hours, the mean residence time (MRT) from 11 to 18 hours. Renal elimination of iron was negligible.

PHARMACEUTICAL PARTICULARS
INCOMPATIBILITIES:
Ferric carboxymaltose injection must only be mixed with sterile 0.9%m/V sodium chloride solution. No other intravenous dilution solutions and therapeutic agents should be used, as there is the potential for precipitation and/or interaction.

SHELF LIFE
See expiry on the pack.
Shelf life after first opening of the container: From a microbiological point of view, preparations for parenteral administration should be used immediately. **Shelf life after dilution with sterile 0.9% m/V sodium chloride solution:** From a microbiological point of view, preparations for parenteral administration should be used immediately after dilution with sterile 0.9% m/V sodium chloride solution.

AVAILABILITY
ELINJEC® Injection 500mg/10ml in a pack of 1's

INSTRUCTIONS
Dosage: As directed by the physician.
To be sold on the prescription of a physician only.
Single dose vial, discard any portion of the content remaining after use.
Keep out of reach of children.
Do not store over 30°C, and protect from heat, light and freezing.
Improper storage may deteriorate the medicine.
Injection should not be used if container is leaking, solution is cloudy or it contains undissolved particle(s).

Manufactured by:
SAMI Pharmaceuticals (Pvt.) Ltd.
F-95, S.I.T.E., Karachi-Pakistan
www.samipharmapk.com
Mfg. Lic. No. 000072

ایلنجیک® انجکشن
(فیرک کاربوکسی مالٹوز)

ہدایات:
خوراک: ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔
صرف ڈاکٹر کے نسخے کے مطابق فروخت کریں۔
وائل صرف ایک دفعہ استعمال کے لئے ہے،
استعمال کے بعد باقی بچ جانے والے محلول کو ضائع کر دیں۔
بچوں کی پہنچ سے دور رکھیں۔
دوا کو ۳۰ ڈگری سینٹی گریڈ سے زیادہ درجہ حرارت پر نہ رکھیں، گرمی،
روشنی اور تجمید ہونے سے محفوظ رکھیں ورنہ دوا خراب ہو جائیگی۔
انجکشن کے ایک ہونے، دُھندلا ہونے یا اس میں کوئی
غیر حل پزیر شے نظر آنے کی صورت میں ہرگز استعمال نہ کریں۔

2000006343 R.N-01/NA/01/2023

120mm