Calcium Chloride 10% w/v Intravenous Infusion
Prescribing Information
Please refer to the Summary of Product Characteristics (SPC) before prescribing.
Presentation: Sterile, clear and colourless solution for slow intravenous infusion in a glass prefilled syringe, containing 100mg of calcium chloride dihydrate per ml of solution. **Indications:** Calcium Chloride Injection is indicated for use in Cardio-pulmonary Resuscitation (CPR) where there is also hyperkalaemia or hypocalcaemia or calcium channel block toxicity. It is also used for the treatment of hypocalcaemia and of calcium deficiency states (a decrease in plasma-calcium concentration below the normal range of 2.15-2.60 mmol/L) as a result of impaired or reduced absorption from the gastrointestinal tract, increased deposition in bone, or to excessive losses, for instance during lactation. Additionally, hypocalcaemia may develop during transfusions utilising citrated blood or during long-term parenteral nutrition unless prophylactic calcium supplementation is employed. Other causes of hypocalcaemia include decreased parathyroid hormone activity, vitamin D deficiency and hypomagnesaemia. **Dosage and administration: This medicinal product is not intended to deliver volumes of less than 2 mL.** For slow intravenous infusion only. Not for intramuscular use, or subcutaneous use. Adults and elderly: In CPR a single dose of 10ml (10% w/v) should be considered, according to the algorithm recommended by the European Resuscitation Council & the Resuscitation Council (UK). Adults in acute hypocalcaemia, a typical dose is 2.25 to 4.5 mmol (approximately 3-7ml of a 10% w/v solution) of calcium given by slow intravenous infusion and repeated as required. Paediatric population: Not recommended for use in children. **Contra-Indications:** Hypersensitivity to the active substance or to any of the excipients. In cardiac resuscitation, the use of calcium is contraindicated in the presence of ventricular fibrillation. Calcium chloride is also contraindicated in those patients with conditions associated with hypercalcaemia and hypercalcuria (e.g. some forms of malignant disease) or in those with conditions associated with elevated vitamin D levels (e.g. sarcoidosis) or in those with renal calculi or a history of calcium renal calculi. The treatment of asystole and electromechanical dissociation. Parenteral calcium therapy is contra-indicated in patients receiving cardiac glycosides, because calcium enhances the effects of digitalis glycosides on the heart and may precipitate digitalis intoxication. Calcium chloride, because of its acidifying nature, is unsuitable for the treatment of hypocalcaemia caused by renal insufficiency or in patients with respiratory acidosis or failure. **Warnings and precautions: Calcium chloride must be administered slowly through the vein**. Too rapid intravenous injection may lead to symptoms of hypercalcaemia. The use of calcium chloride is undesirable in patients with respiratory acidosis or respiratory failure due to the acidifying nature of the salt. In patients of any age ceftriaxone must not be mixed or administered simultaneously with any calcium-containing IV solutions, even via different infusion lines or at different infusion sites (consult the SPC for additional information). A moderate fall in blood pressure due to vasodilation may attend the injection. Since calcium chloride is an acidifying salt, it is usually undesirable in the treatment of hypocalcaemia of renal insufficiency. Calcium chloride injection is irritating to veins and must not be injected into tissues, since severe necrosis and sloughing may occur, and great care should be taken to avoid extravasation or accidental injection into perivascular tissues (consult the SPC for additional information). Excessive amounts of calcium salts may cause hypercalcaemia, therefore careful monitoring of serum-electrolyte concentrations is essential throughout therapy. It is particularly important to prevent a high concentration of calcium from reaching the heart because of danger of cardiac syncope. If injected into the ventricular cavity in cardiac resuscitation care must be taken to avoid injection into the myocardial tissue. Care should be taken not to infiltrate the perivascular tissue due to possible necrosis. Solutions should be warmed to body temperature. Injections should be made slowly through a small needle into a large vein to minimize venous irritation and avoid undesirable reactions. Calcium Chloride is generally considered to be the most irritant of the commonly used calcium salts. **Interactions:** For interaction between calcium containing products and ceftriaxone, please see section above. Calcium-containing products may decrease the effectiveness of calcium channel blockers. Large intravenous doses of calcium can precipitate arrhythmias by interacting with cardiac glycosides (e.g. digitoxin and digoxin). Because of the danger involved in the simultaneous use of calcium salts and drugs of the digitalis group, a digitalized patient should not receive an intravenous injection of a calcium compound unless the indications are clearly defined. Calcium salts should not generally be mixed with carbonates, phosphates, sulfates or tartrate in parenteral mixtures. Calcium salts reduce the absorption of bisphosphonates (in the treatment of Paget's disease or hypercalcaemia of

malignancy) and must be given at least 12 hours apart. Thiazide diuretics may increase the risk of hypercalcaemia. Calcium salts reduce the absorption of tetracyclines. **Pregnancy and lactation:** Calcium crosses the placenta and is also excreted in breast milk. The benefits of administration must outweigh any potential risk. It is recommended in the UK for an increase in calcium intake during lactation. Furthermore, the absorption of calcium is increased during pregnancy and lactation. **Effects on ability to drive and use machines:** No adverse effects have been reported. **Undesirable effects:** Rapid intravenous injections may cause the patient to complain of tingling sensations, a calcium taste, and a sense of oppression or "heat wave". Injections of calcium chloride are accompanied by peripheral vasodilation as well as a local burning sensation and there may be a moderate fall in blood pressure. Necrosis and sloughing with subcutaneous or intramuscular administration or if extravasation occurs have been reported. Soft tissue calcification, bradycardia or arrhythmias have also been reported. Hypertension. Venous thrombosis. Excessive amounts of calcium salts may lead to hypercalcaemia. Symptoms of hypercalcaemia may include: anorexia, nausea, vomiting, constipation, abdominal pain, muscle weakness, mental disturbances, polydipsia, polyuria, bone pain, nephrocalcinosis, renal calculi, and, in severe cases, cardiac arrhythmias and coma. Too rapid intravenous injection of calcium salts may also lead to many of the symptoms of hypercalcaemia as well as a chalky taste, hot flushes and peripheral vasodilation. **Product Licence Number:** PL 12064/0020. **Product Licence Holder:** Aurum Pharmaceuticals Ltd, Bampton Road, Romford, RM3 8UG. **Basic NHS Price:** £9.89. **Legal Category:** POM. **Further information:** Martindale Pharma, Bampton Road, Romford, RM3 8UG. Tel: 01277266600. **Date of Preparation:** October 2020.

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Martindale Pharma. Tel: 01277 266 600. e-mail. drugsafety.uk@ethypharm.com