

Prescribing Protocol SESLHDPR/659
Sodium thiosulfate for calciphylaxis

Prescribing Protocol	
Title	Sodium thiosulfate for calciphylaxis in dialysis patients
Areas where Protocol/ Guideline applicable	Haemodialysis Units and Renal/Nephrology inpatient wards
Areas where Protocol/ Guideline not applicable	All other areas
Authorised Prescribers	Initiation on recommendation by treating consultant nephrologist Medical officers assigned to renal unit or renal team. Please note this will require a SAS form to be completed.
Indication for use	Treatment of confirmed calciphylaxis in dialysis patients
Clinical condition Patient selection: Inclusion criteria	Calciphylaxis diagnosed in a patient on dialysis. The diagnosis may be confirmed on skin biopsy, or could be a clinical suspicion of calciphylaxis due to lesion appearance.
Contra-indications	Nil specific contraindications identified
Precautions	<ul style="list-style-type: none"> • Hypersensitivity to sodium thiosulfate • Hypotension – sodium thiosulfate can cause serious hypotension • Anaemia • Diminished oxygen or cardiovascular reserve • Congenital methemoglobin reductase deficiency, and other conditions or concurrent drugs associated with risk of developing methemoglobinemia • Glucose-6-phosphate dehydrogenase deficiency – increased risk of haemolytic crisis • Oedematous sodium retaining conditions, like liver cirrhosis, congestive heart failure, and renal impairment
Place in Therapy	First line therapy for confirmed calciphylaxis
Dosage (Include dosage adjustment for specific patient groups)	25 g IV three times a week
Duration of therapy	Until improvement seen in skin lesions
Important Drug Interactions	No known significant interactions
Administration instructions	Infuse 25 g/100 mL vial undiluted intravenously over 60 minutes (usually during the last hour of haemodialysis)
Monitoring requirements	<ul style="list-style-type: none"> • BP • Oxygen levels • Calcium levels • QT prolongation
Effectiveness (state objective criteria)	Resolution/improvement in number and size of lesions

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Management of complications	<p>Hypocalcemia/Metabolic acidosis – Bloods on dialysis. Managed as per clinical recommendations. Cease infusion in the setting of severe hypocalcemia or metabolic acidosis.</p> <p>Hypotension – reduce the rate of infusion</p> <p>QT Prolongation – consider reducing the rate of infusion or cease the infusion and ask for medical review</p>
Basis of Protocol/Guideline	<p>N Engl J Med 2018; 378:1704-1714 DOI:10.1056/NEJMra1505292</p> <p>MIMS Online (2014). DBL Sodium Thiosulfate Injection – Product Information. Accessed June 18 2019</p> <p>Micromedex (2019). Sodium nitrite/sodium thiosulfate. Accessed June 18 2019</p> <p>UpToDate (2018). Calciphylaxis (calcific uremic arteriopathy). Accessed June 18 2019</p> <p>UpToDate (2019). Sodium thiosulfate: Drug information monograph. Accessed June 18 2019</p>
Groups consulted in development of this protocol	<p>Department of Nephrology, POWH Pharmacy, POWH</p>

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GOVERNANCE	
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