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	• 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 methemoglobinaemia • 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 Effectiveness (state objective criteria)	• BP • Oxygen levels • Calcium levels • QT prolongation Resolution/improvement in number and size of lesions

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

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GOVERNANCE	
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Chairperson, QUM Committee	Dr John Shepard
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