

Sodium Thiosulfate 25% Topical Cream in Treatment of Dystrophic Calcinosis Cutis – Case Report



CLINICAL FEATURES

- 65 year old female, Caucasian
- History of hypertension, gout tophi (?), dermatomyositis (2004), wrist fracture (2015)
- Current medications: telmisartan, allopurinol

INTERVENTIONS, CASE PROGRESS, OUTCOMES

Presented to emergency department in June 2017 with infected ulceration to right thumb. Reports 2.5 years history of swelling and pain in right thumb and left middle finger.

Diagnosed with infected dystrophic calcinosis cutis, secondary to inflammatory myositis/limited systemic sclerosis overlap. Allopurinol was ceased.

Initially treated with parenteral and oral antibiotics, analgesia, and colchicine. The infection responded favourably to antibiotics, however persistent pain and cosmetic appearance of lesions were of great concern to the patient.

Colchicine was ceased in November 2017, and the treating rheumatologist enquired with the pharmacy department about the availability of topical 25% sodium thiosulfate.

Literature research has revealed a number of case reports supporting topical use of sodium thiosulfate in calcinosis cutis of various aetiologies, in the form of wet dressings and topical creams. As there were no ulcerations and/or open wounds present, application of topical cream twice daily was recommended as easier to manage and less cumbersome than wet dressings.

Sodium thiosulfate creams have been reported as physico-chemically stable in cold cream type bases, lanolin alcohol or wool fat containing absorption base type ointments, and in certain proprietary excipients. Decision was made to prepare the product in the form of W/O cream, consisting of water and Eucerin® wool alcohols ointment, due to ease of compounding and readily available excipients. Due to lack of stability data, product was assigned a conservative 28-day expiry.

Treatment with sodium thiosulfate cream was started in June 2018. On subsequent 8-week follow up, patient reported subjective improvement with no noticeable side effects, however due to lack of formal initial wound assessment and/or photographs, objective improvement could not be established. The current condition was documented photographically and patient was advised to continue treatment for at least 6 months in total before efficacy of treatment could be established.

Sodium thiosulfate 25% Topical Cream Composition

Sodium thiosulfate · 5H ₂ O USP	25.0g
Water purified	17.5mL
Eucerin® wool alcohols ointment (Beiersdorf)	57.5g



CONCLUSION

Sodium thiosulfate, in the form of extemporaneously compounded cream, is an inexpensive and safe option for treatment of cutaneous calcinosis. Although there is no strong scientific evidence available to support efficacy of this treatment, a trial of this medication may be a sensible option for patients who have failed or are not considered suitable candidates for first line treatments.

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