

# SODIUM THIOSULPHATE IN CUTANEOUS NECROSIS BY CALCIPHYLAXIS TREATMENT. A CASE REPORT.

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## Background

Calciphylaxis is a vasculopathy characterized by middle layer calcification in vessels and their inner layer proliferation, associated with fibrosis and luminal thrombosis resulting in the necrosis of the surrounding tissues.

## Purpose

Description of different Sodium Thiosulfate formulations and analysis of effectiveness and safety in a case of cutaneous necrosis by calciphylaxis..

## Material and methodology

Case: Female, 44 years, recipient of a kidney transplant and receiving hemodialysis. The patient showed an ulcerated lesion in the right leg that she associated with an insect bite. Later, similar and very painful injuries have appeared on contralateral leg. Once diagnosed with cutaneous necrosis by calciphylaxis ulcers, a treatment based on Sodium Thiosulfate is suggested: antioxidant agent, vasodilator and calcium chelator.

## Results

It was decided to administer the patient the Sodium Thiosulfate through three different ways:

- ✓ Intravenous<sup>1</sup> 25 g/1,73 m<sup>2</sup> of corporal surface, three times a week during hemodialysis treatment. For this treatment, we weighted the Sodium Thiosulfate and added sterile water to dissolved it and then made up to the final volume. Then, dispense the solution into the bottles at the laminar air flow (LAF) cabin with a 0,22 micron filter.
- ✓ Intralesional<sup>2</sup> 1/6M concentration monthly dosage.
- ✓ Topical<sup>3</sup> solution 10% applied to the ulcerous lesions with occlusive dressing. For the topical formulation, the Sodium Thiosulfate is weighted and dissolved in purified water. Then, it is incorporated to the cold cream by constant agitation until forming a homogeneous paste.

Monitoring of lesions changes is followed and the patient is given 4 cycles of intralesional Sodium Thiosulfate treatment, 4 month period of intravenous treatment and 2 month period of topical formula application.

Clinical improvement of lesions is observed and no signs of intolerance are presented.



## Discussion and conclusions

Although scientific evidence reported includes a few patients, injuries clinical improvement and a good tolerance to all the topical, intralesional and intravenous administrations support the effectiveness and safety of using Sodium Thiosulfate in Cutaneous Necrosis by Calciphylaxis treatment and, in this case, improving patient quality life.

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3. [Ratsimbazafy V](#) et al. Dramatic diminution of a large calcification treated with topical sodium thiosulfate. *Arthritis Rheum.* 2012 Nov;64(11):3826