

# SEARCHING FOR A TREATMENT FOR PERIPHERAL TISSUE ISCHEMIA IN NEWBORNS: A CASE REPORT

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## BACKGROUND AND IMPORTANCE

- Topical nitroglycerin has been used off label as salvage therapy of peripheral tissue ischemia (PTI).
- 2% topical nitroglycerin ointment (TNO) as a compounding formula was requested for two premature babies with PTI due to vascular catheterization.
- Shortage of raw material for making the formula.



## AIM AND OBJECTIVES

- To **identify an alternative** for 2% TNO.
- To describe the **effectiveness** and **security** of applying commercialized 0,4% rectal nitroglycerin ointment (RNO).

## MATERIALS AND METHODS

- Prospective study (January-June 2022) of **TWO NEWBORNS**:

### PATIENT 1

Female, 31+5; 2 days, 1500g.  
➤ Ecchymosis in 4 fingers.

### PATIENT 2

Female, 24+6; 5days, 595g.  
➤ Marked necrosis in 5 finger pads.

- Spanish Pharmacy Preparations and Compounding Group
- Spanish Agency for Medicines and Medical Products (AEMPS)
- MEDLINE, PubMed, Embase and Google Scholar

ALTERNATIVE  
SEARCH

- A **CLOSE FOLLOW-UP** was carried to evaluate effectiveness and security of the alternative drug.



## RESULTS

Evaluation

0,4% RNO

Safest  
Easy to dose  
Most effective  
Quickest to acquire

### PATIENT 1

- Ecchymosis completely disappeared in 48h.
- No adverse events. No vasoactives.
- No loss of phalanges.

### PATIENT 2

- 10 days to remit the marked necrosis.
- Well tolerated. Dopamine (↓BP).
- No loss of phalanges.

## CONCLUSION AND RELEVANCE

- 0.4% RNO in PTI was effective and safe. However, it is necessary to be studied in more patients.
- Pharmacist's role and its integration in the multidisciplinary team is crucial to ensure a quick response in emergency situations.

