



# **A Pinch of Salt is All It Takes**

**Hypertonic Saline in Dermatology**

# Clinical Indications

Plantar and Periungual Warts

Pyogenic Granuloma

Labial Mucocele

Umbilical Granuloma

# Preparation & Application Protocol

## PREPARATION

- Dissolve 40-50g table salt in 100ml tap water
- Creates 35.9% saturated hypertonic saline
- Solution stable for 10-15+ days

## APPLICATION METHODS

### → **Topical**

Apply salt pinch to lesion, hold 30 min, 2x daily

### → **Occlusion**

Cover with surgical adhesive tape

### → **Combination therapy**

Keratolytic agents (Lactic Acid 16.66% + Salicylic Acid 16.66%) once daily at night

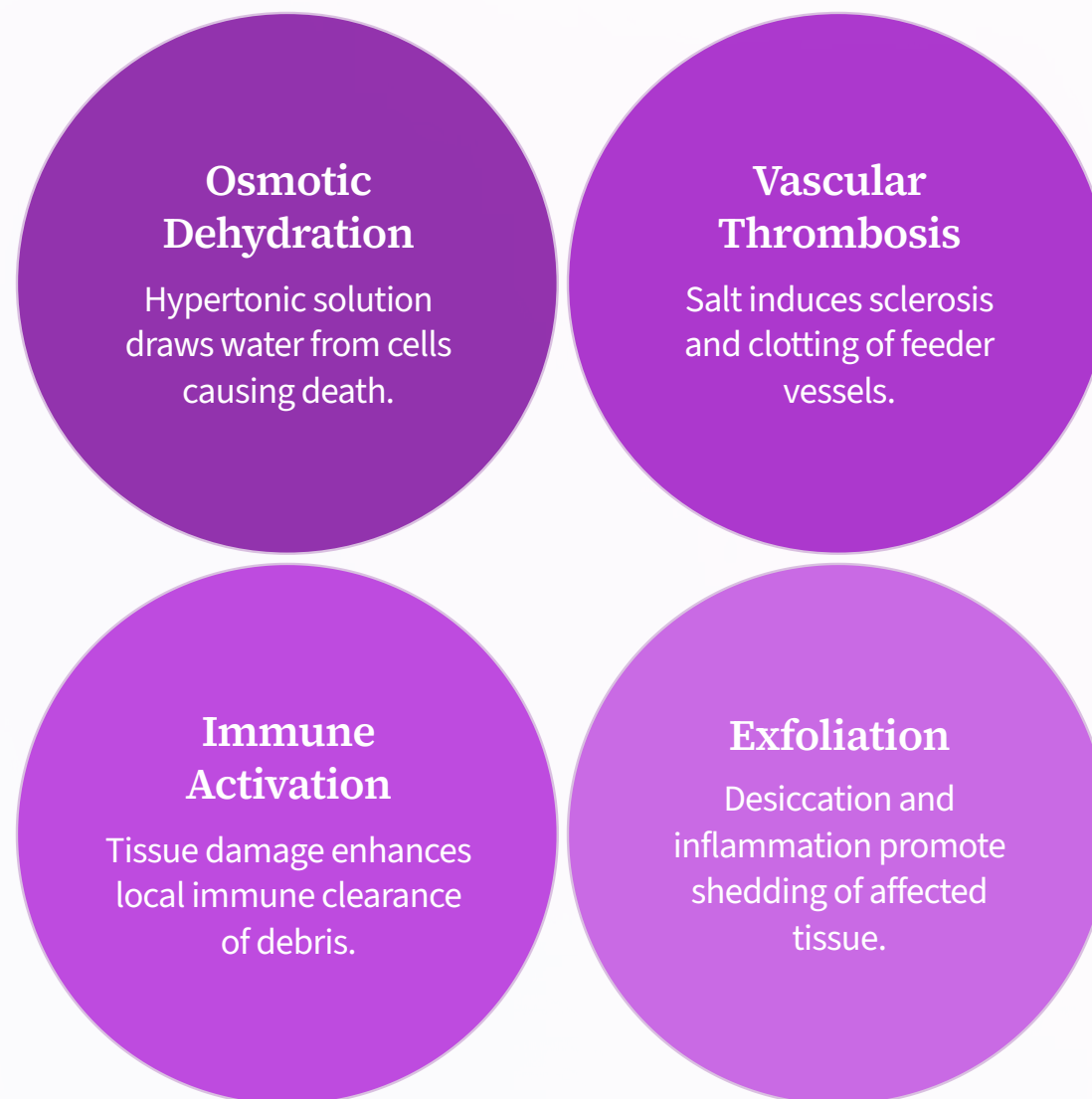
### → **Immersion**

Finger dip for periungual warts (5 minutes)

### → **Intralesional**

Direct injection for mucoceles

# Mechanism of Action: Dual Sclero-Keratolytic Effect



## Osmotic Dehydration

35.9% hypertonic solution ( $\approx 40\times$  stronger than normal saline) draws water out of infected cells, triggering cell death

## Vascular Thrombosis

Salt solution scleroses (clots) the feeding capillaries at the base of the wart, depriving the virus of nutrients

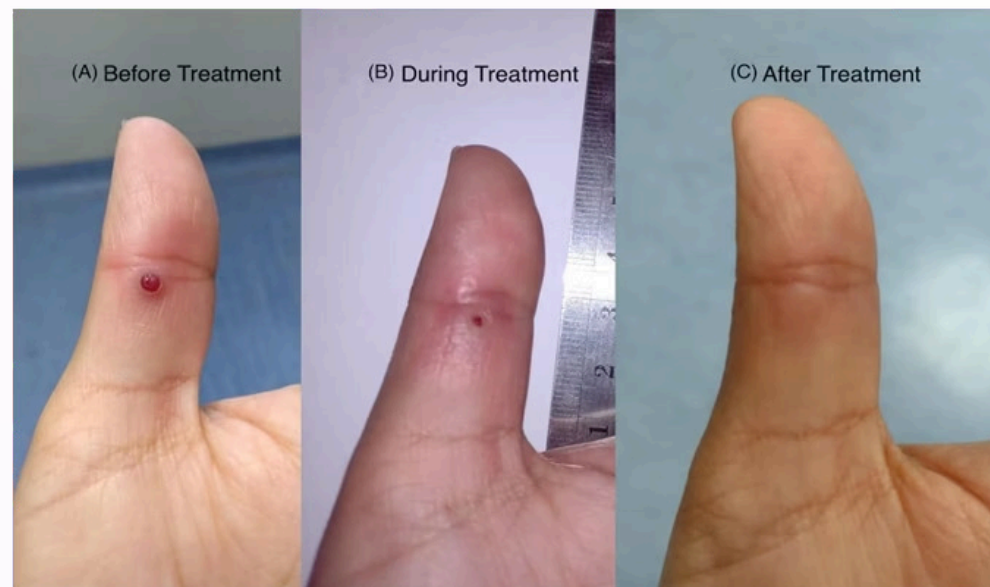
## Immune Response

Local tissue stress helps the immune system recognize and clear HPV infection

## Exfoliation

Combined with retinoids, causes keratolysis and enhanced penetration of saline

## RESULTS



**Figure 1.** The development of umbilical granuloma during common salt treatment

# Clinical Results & Safety Profile

## Clinical Outcomes

01

**Effective treatment for multiple dermatological conditions**

02

**Documented success in wart removal, granuloma resolution, and mucocele management**

03

**Results visible in before/after clinical cases**

## Adverse Effects & Safety

**Generally well tolerated**

**Temporary dryness and itching at application site**

**Mild hyperpigmentation may occur**

**Adverse effects usually resolve after stopping treatment**

**Safe for use in pediatric and adult populations**

**Based on anecdotal case reports, no RCTs done in this regard**

## **Key References**

1. Karaguzel G, Aldemir A. Umbilical Granuloma: modern Understanding of Etiopathogenesis, Diagnosis, and Management. J Pediatr Neonatal Care. 2016;4(3):1–5. doi:10.15406/jpnc.2016.04. 00136
2. Amy TN, The Umbilicus, Granuloma; Nelson pediatrics 21 editions. 4175–4176
3. Daruwalla SB, Dhurat RS. A pinch of salt is all it takes! The novel use of table salt for the effective treatment of pyogenic granuloma. J Am Acad Dermatol 2020;83:e107–8..
4. Mu MH, Wang YN, Huang Y, Niu XL, Chen HD, Gao XH, et al. Local hyperthermia cleared multifarious viral warts in a patient with cushing's syndrome. Dermatol Ther 2019;32:e12815.

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