

Wet Table Salt and Its Saturated Hypertonic Solution for Treating Retinoic Acid Resistant Plane Viral Warts on Face

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Abstract

Plane viral warts on the face can be difficult to treat at times. Various treatment approaches for facial viral warts have had variable degrees of effectiveness. In contrast, the majority of existing treatments are more costly, painful, and difficult to manage. In approximately 15.6% of instances, retinoic acid (0.05%) is also ineffective. It is very difficult to cure warts on the face at a young age. In pyogenic granuloma, table salt (NaCl) is useful as a sclerosing agent, and its hypertonic solution (15%) is effective in prolalial mucoceles. The aim of treating viral warts is to necrose infected cells and sclerose or thrombose their feeding capillaries at the wart's base.

Keywords: Face, hypertonic solution, keratolytic agent, plane viral wart, retinoic acid, table salt

CHALLENGE

A number of times, plane viral warts on the face present a therapeutic challenge. Various treatment modalities for plane viral warts on the face have shown varying degrees of success.^[1] The majority of available therapies, on the other hand, are more expensive, painful, and difficult to obtain. Retinoic acid (0.05 percent) is also not effective approximately in 15.6% of cases.^[2] Furthermore, treating warts on the face at a young age is difficult. Table salt (NaCl) is effective as a sclerosing agent in pyogenic granuloma,^[3] and its hypertonic solution (15%) in prolalial mucoceles.^[4] The goal of treating viral warts is to necrosis the infected cells and sclerose or thrombose their feeding capillaries, which are located at the base of the wart. However, using a saturated hypertonic solution of table salt as a topical sclerosing agent on intact hyperkeratotic plane warts is difficult.

SOLUTION

We selected the cases of retinoic acid resistant plane viral warts in the age group 9 to 15 years. For treating the warts, a pinch of table salt is wrapped in gauze and dipped in warm tap water before being applied to the warts two to three times per day for 3 to 5 minutes, and retinoic acid (0.05%) in the night. To make the

procedure simple, a saturated hypertonic saline of table salt (SHSTS) of 35.9 percent is made and used in place of wet table salt by dissolving 40 to 50 grams of salt in 100ml of tap water. The solution's concentration is approximately 40 times that of normal isotonic saline. For six weeks, the procedure is repeated every day. The patients are followed up weekly. The warts resolved in 3 to 4 weeks. The treated sites had dryness, itching, and hyperpigmentation for the short term. SHSTS's mechanism of action is not well known, but it has disinfectant, exfoliative, and osmotic properties, as well as the ability to increase apoptosis, immune modulation, and reduce post-injury inflammation. As a result, combining warm wet table salt or its SHSTS with retinoic acid could be an effective treatment option for chronic viral warts on the face [Figure 1a-d]. In this resistant case, retinoic acid is used as a keratolytic agent to improve the penetration and effectiveness of the salt or its solution. Instead of retinoic acid or other keratolytic agents, few warts can be pinched out with the tip of a small mosquito forceps [Figure 2a-c]. This

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Figure 1: a-d. The plane facial warts on the face resolved in 3 to 4 weeks after treating with saturated hypertonic solution of table salt (wet table salt) along with retinoic acid

method was used to treat three patients who had warts on their faces. However, it is a preliminary report. The effectiveness of the salt with or without retinoic acid as a cost-effective, readily available therapy should be studied in a large number of patients in a controlled clinical study.

Acknowledgment

None.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/



Figure 2: a-c. Pinched out plane warts on face resolved in 3 to 4 weeks after treating with saturated solution of table salt along with retinoic acid

her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflict of interest

There are no conflicts of interest.

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