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Practical Tips for Treating Pediatric Dermatology Patients

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The purpose of this paper is to provide strategies to help deliver quality care that meets the unique needs of children and their families in a dermatology outpatient clinic setting. The tools highlighted are simple and fast to implement in a dermatologic office setting. Five separate tips are presented herein.

Tip 1: Dispensing 2 supplies for children living in multiple homes

Many children that we treat live in more than one primary home. Often this means that the family must remember to shuttle treatments back and forth between the homes with the child. This becomes a barrier to proper care, as the family or child could easily forget to bring the treatment to the other home, causing lapses in treatment, and contributing to uncontrolled skin disease. A simple solution is to dispense sufficient medication so that the child has all the necessary treatments at each home, thereby removing the need to shuttle medications between locations. This approach is especially well suited for topical treatments. For example, when treating a child with atopic dermatitis who lives in 2 primary homes, it is beneficial to dispense 2 sets of topical medications–one for flare treatment and one for maintenance treatment–at each home simultaneously. This helps to streamline things for the family involved as well.

Tip 2: Cryotherapy simplified with an otoscope speculum

The use of otoscope specula for cryotherapy is not new. In her paper, Fern (2004)[1] described a clinical technique where a disposable otoscope speculum was used to focus the spray from the liquid nitrogen canister onto the target skin lesion. In this manner, the disposable otoscope speculum is placed directly on the target lesion and acts to shield the surrounding skin from the liquid nitrogen spray.

This technique is advantageous when using cryotherapy to treat children as well. Verruca vulgaris and molluscum contagiosum are benign cutaneous viruses that commonly infect children. A child may develop a verruca on the eyebrow, the vermilion border of the lip, or in the naris. If active intervention is desired, one option is cryotherapy. Using an otoscope speculum to direct the spray in these situations allows for trickier locations to be treated, as it shields the surrounding skin and structures. Furthermore, children are moving targets and cannot be relied upon to remain still during treatment with cryotherapy. The addition of the otoscope speculum provides a direct touch point

between the young patient and the healthcare provider, as the healthcare provider holds the speculum directly on the patient's skin lesion. This allows the provider's hand to stabilize the speculum and react and move in response to the child's movements. The cryotherapy spray from the liquid nitrogen canister is directed into the otoscope speculum, which channels the spray onto the target lesion **(Figure 1)**.

Tip 3: Procedural distraction

Dermatological procedures, such as skin biopsies, are frequently accompanied by a degree of pain; for example, pain associated with the infiltration of local anesthesia. These procedures can be challenging in children and adolescents, but at times they are necessary. Procedural sedation may not be possible or desired in an outpatient setting. The process of overwhelming the senses can help distract the child from the pain of a needle poke in this situation. The goal of overwhelming the senses is to provide abundant sensory stimuli so that the brain does not focus on the pinch or pain from the infiltrating local anesthetic. Examples of potential options to achieve this include listening to music, watching a video, holding a hand or a stuffed animal, singing, or eating a special treat such as a lollipop or popsicle. Ideally several stimuli should be employed simultaneously.

All children are different, and it is important to mention that this quantity of sensory stimulation would not be appropriate for all children. Also, these techniques for overwhelming the senses and distraction should not replace other strategies to minimize the pain of local anesthesia infiltration, (i.e., such as selecting a smaller needle diameter, slow speed of infiltration, etc.)

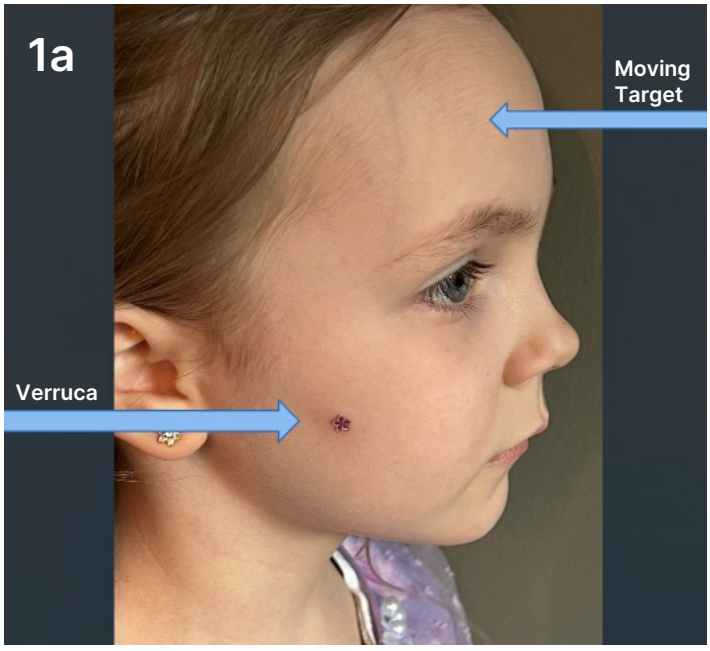
Tip 4: Table salt for the treatment of pyogenic granulomas

Pyogenic granulomas are benign acquired vascular neoplasms that can be problematic because of their tendency to grow quickly and bleed. The standard of care for treatment is surgical removal. This allows for histopathologic confirmation of the diagnosis, and distinction from malignant neoplasms.

Sometimes, non-surgical treatment options are desired. Effective non-surgical treatment of pyogenic granulomas with topical beta-blockers, such as topical timolol applied twice daily, is well documented. Topical imiquimod is another option, however, the resulting inflammatory reaction limits its clinical application.[2]

Recently, table salt has been investigated as a therapeutic option for pyogenic granulomas. Daruwalla et al.[3] described the use of topical table salt for this purpose **(Figure 2)**. In their study, soft paraffin was used to create a well around the target pyogenic granuloma, and topical table salt was placed within the well. This was then secured with tape. This process was repeated daily. Their study of 50 patients included 15 pediatric patients. The results indicated a decrease in bleeding by day 3.7 (mean). They achieved 100% resolution of pyogenic granulomas after a mean of 14.7 days, with a single recurrence of pyogenic granuloma reported 11 months later. Adverse events included difficulty with the application site, mild burning if the pyogenic granuloma was eroded, and surrounding eczema.

Table salt has also been demonstrated as an effective treatment for umbilical granulomas in infants.[4] In a study of 17 infants, table salt was applied to a cleaned area with a wet toothpick in the clinic. The treated area was secured with surgical adhesive



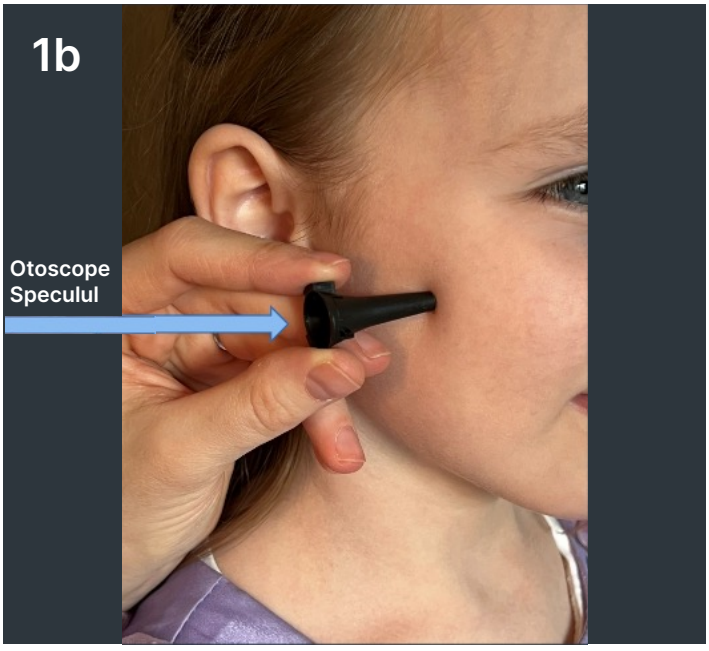


Figure 1 A-C: Using cryotherapy with an otoscope speculum; *courtesy of Genvieve Gavigan, MD.*

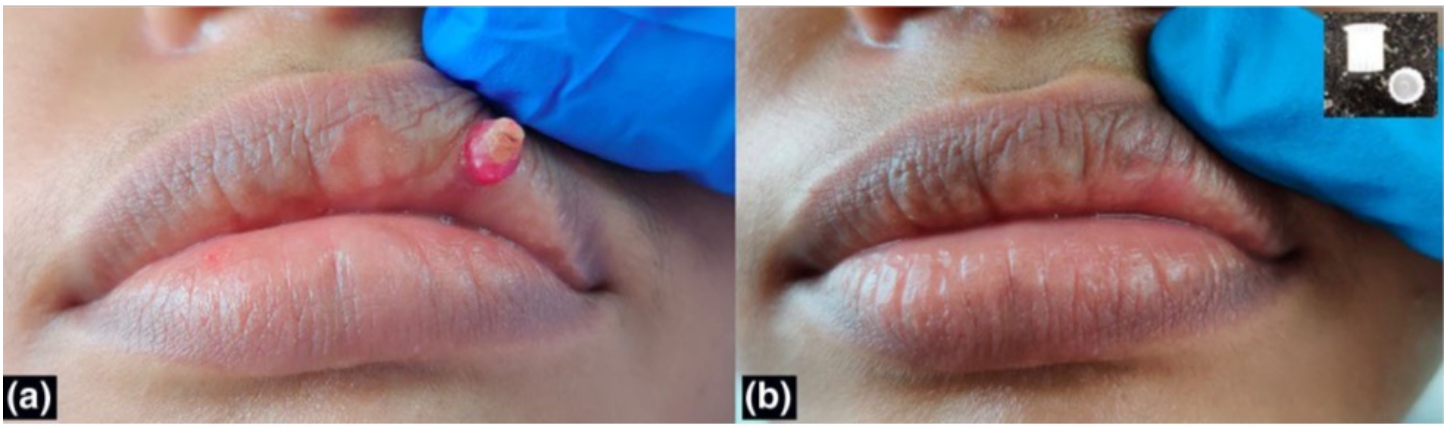


Figure 2 A-B: The use of common salt for the treatment pyogenic granuloma; *from Daruwalla et al., 2021*

tape. After 24 hours, all 17 infants showed complete resolution of their umbilical granulomas.

The mechanism of action by which salt treats pyogenic granuloma and umbilical granuloma is through the creation of a hyperosmolar environment, which desiccates and shrinks the pyogenic granuloma or umbilical granuloma.[3,4]

Tip 5: Tools to learn how to swallow pills

Learning to swallow medication pills is a life skill. Yet, it can be scary and difficult to master for many children. Dr. Bonnie Kaplan has created an online learning program, based on her research to assist children and their families to learn this problematic skill. Her video, "How to Swallow Pills by Dr. Bonnie Kaplan", is available in YouTube. In it, she outlines a stepwise method that can be practiced at home. At first, children practise swallowing water while positioning their heads in 5 different ways (head turned to the left, head turned to the right, head looking up, head looking down, and head looking straight ahead). Next, the same 5 head positions are used when swallowing a small hard candy. It is recommended to spend 30 minutes to learn the technique and to practice for 14 days (about 5 minutes each day) to achieve the skill of swallowing pills. This video also describes possible pitfalls and additional methods to help remedy them.[5]

In conclusion, five practical and easy-to-implement tips were reviewed. Taken together, these tips may ameliorate the tolerability of cryotherapy and skin biopsies in children, providing real-world strategies for treating dermatologic conditions and prescribing medications to children.

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