

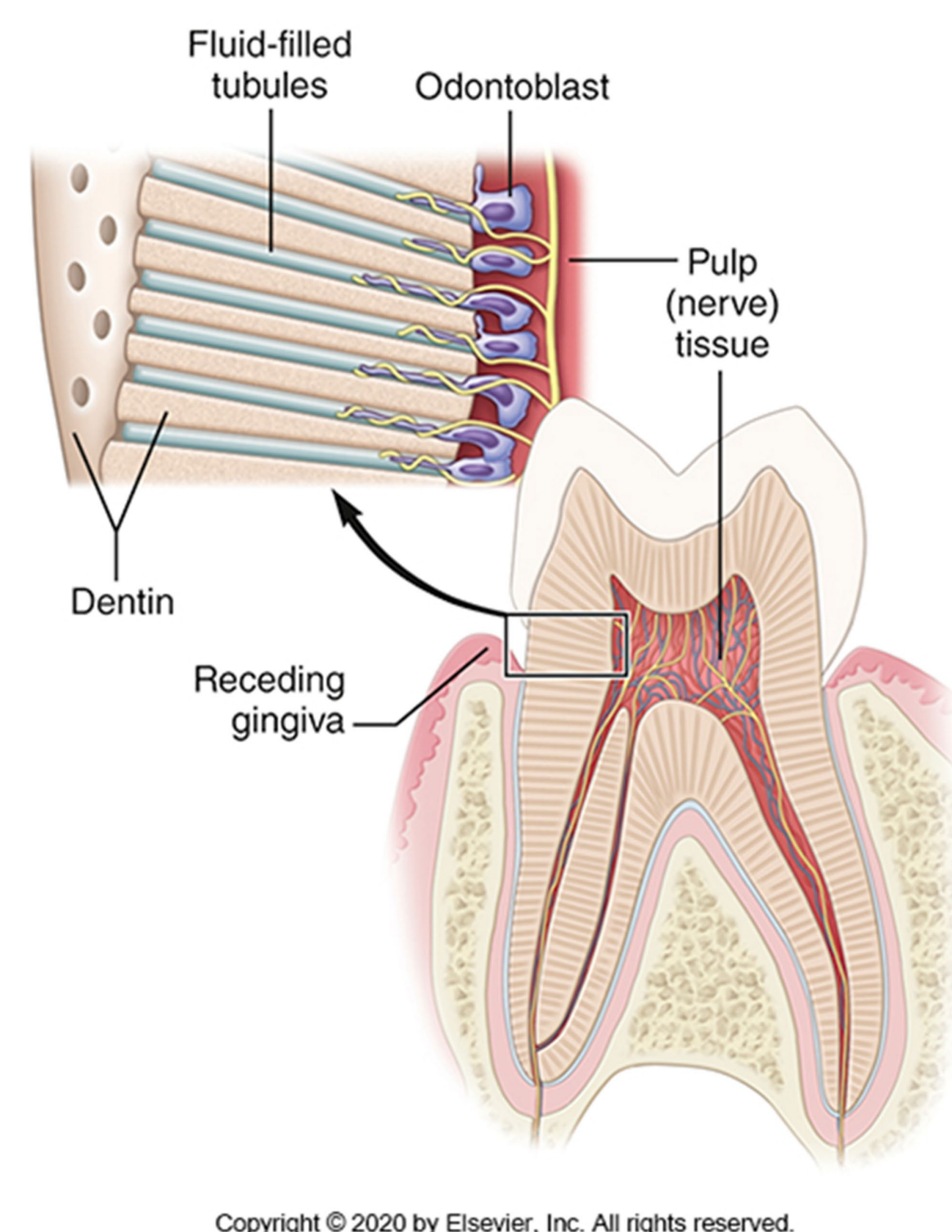
Increased Dentin Hypersensitivity Following Fluoride Treatment

A Case Report

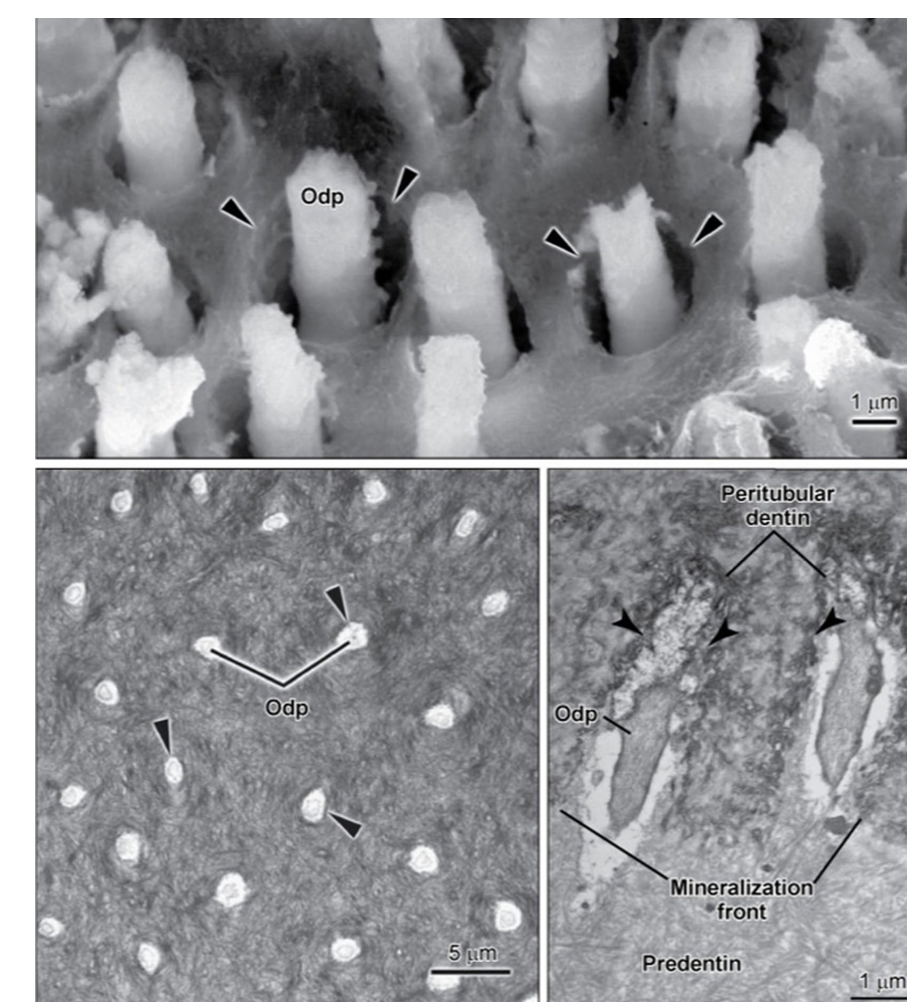
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Background

- Purpose: To report on a case of an adult female patient with dentin hypersensitivity treated with Sodium Fluoride varnish
- Dentinal hypersensitivity has been referred to as one of the most painful and chronic dental conditions, with a reported prevalence of between 4% and 57% in the general population and a higher prevalence in periodontal patients (60%–98%).
- Characterized by short, sharp pain that occurs in response to thermal, evaporative, tactile, osmotic, or chemical stimuli.
- The cause of the sensitivity is due to the exposure of the dentin due to gingival recession, abrasion, erosion, periodontal therapy, and/or defective restorations and cannot be ascribed to any other form of dental defect or pathology.
- Various fluoride compounds act as barriers to dentinal tubules, preventing fluid movement and thereby reducing sensitivity.
- Application Duraflor® Halo 5% Sodium Fluoride Varnish is a common treatment option, but there is little evidence to support that it may produce an adverse reaction by worsening of symptoms.



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Narrative

- An otherwise healthy 37-year-old female patient with a history of dentin hypersensitivity was evaluated by an experienced dental hygienist.
- The patient appears to have good oral self-care and reported to suffer from cold sensitivity for many years.
- She was able to reduce it in the past by routinely using Sensodyne toothpaste and avoiding cold stimuli.
- A minimal gingival recession ($\leq 1\text{mm}$) was noted clinically.
- Following the dental prophylaxis appointment the clinician decided to apply sodium fluoride varnish as part of treatment for the hypersensitivity.
- For unknown reason the varnish failed to produce an immediate effect and even caused an increase in sensitivity in 1 week.

Outcomes

- The pain reaction of exposed dentine was induced by a blast of air from a syringe of dental unit, asking patients to assess the severity of pain on the VAS scale. Surveys were carried out three times: before, immediately after and 1 week after the application of the varnish.
- Initially the patient reported level of pain to be at 6/10, immediately after the varnish application the patient reported that the level of pain to remain at the same level and reported 8/10 in a week.
- The patient reported that immediately after an application of topical fluoride the sensitivity did not change and remained at 6/10 but worsened from 6/10 to 8/10 after a week.



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Timeline

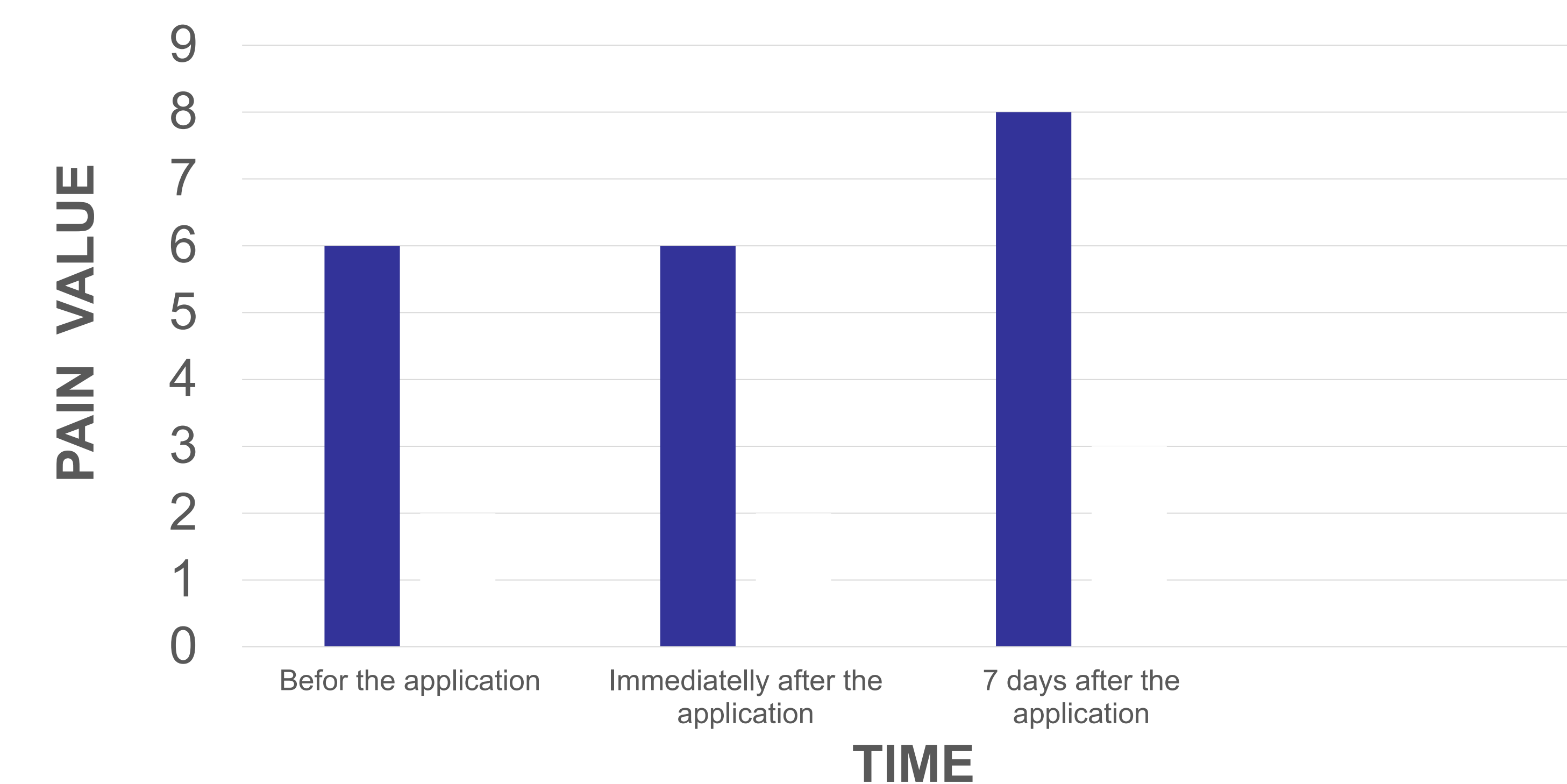


FIGURE 1. Timeline of interventions

Discussion

- The Sodium Fluoride varnish was included in this case as this product is widely applied in the professional treatment of dentin hypersensitivity and typically has an immediate relief effect that is lost after three months of application.
- Possibly other ingredients may contribute to increase in sensitivity and should be further evaluated.

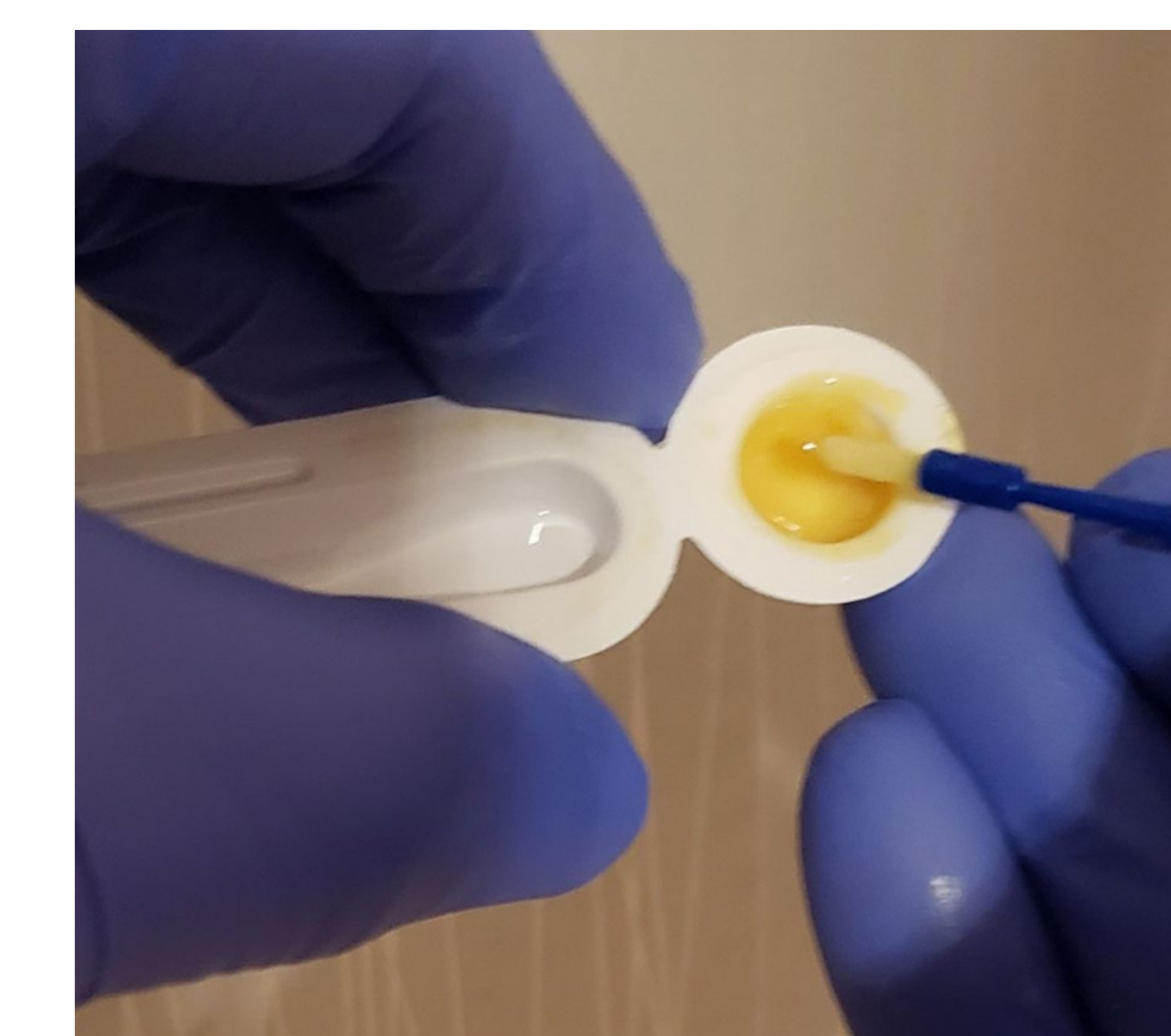


FIGURE 2. Clinician preparing NaF varnish

FIGURE 2. Patient undergoing application of the varnish

