

# A medical hypothesis: Injection Snoreplasty with B vitamins

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## Abstract

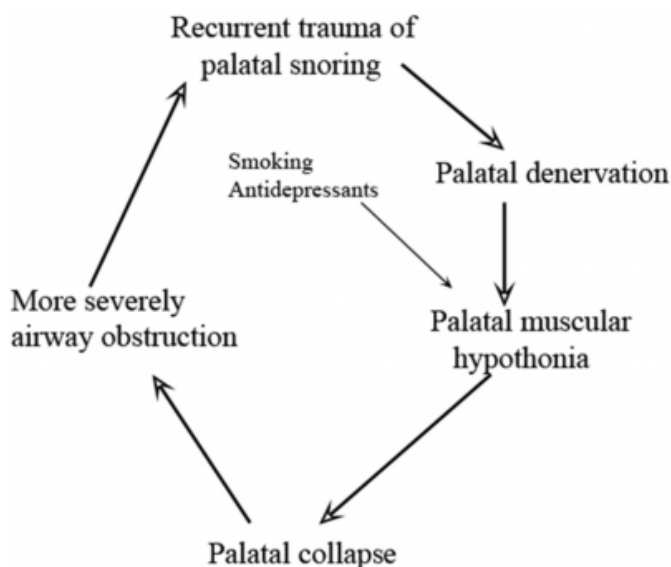
Neuronal degeneration at soft palate and uvula muscles due to recurrent trauma of snoring may be causing to muscular hypotonia with neuronal degeneration and collapsibility thus more severely airway obstruction and OSA 1. Palatal muscular hypotonia can be treated with the newer palatal procedures (injection snoreplasty, pillar implant and soft palate radiofrequency). However, B-vitamins (B1, B6, B12) can be use at injection snoreplasty because of improving the axonal transport, neuronal excitability, or synthesis of neurotransmitters.

## INTRODUCTION

Palatopharyngeal denervation and degeneration processes and thus a neuromuscular disorder of the soft palate in patients with sleep disordered breathing was previously reported 1. Both sensory and motor neurons of soft palate muscles can be affected. The progressive local neurogenic lesion caused by the trauma of snoring might be a potential contributory factor to palatopharyngeal collapsibility in patient with OSA 2 (Table I). This leads to decreasing of retropalatal upper airway patency with palatal snoring.

## Figure 1

Table 1: The mechanism of palatal denervation and increased palatal collapse.



Many procedures exist for treatment of primary palatal snoring. Palatal denervation, treatment of this condition with B-vitamins (B1, B6, B12) as a medical hypothesis and injection snoreplasty are briefly discussed in this article.

## DISCUSSION

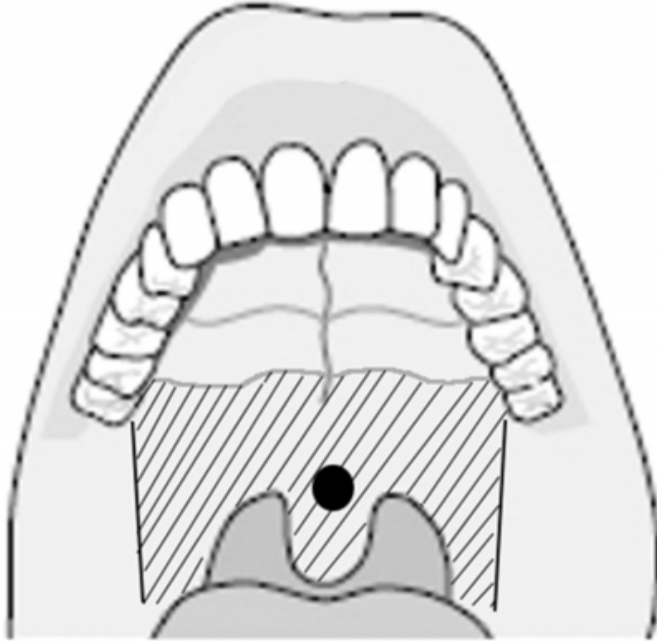
The aim of the modern office based palatal procedures such as pillar implant, palatal radiofrequency and injection snoreplasty treats palatal collapsibility with palatal fibrosis or scar tissue. Postoperative scarring may also stabilize the soft palate and thus prevent vibration and snoring sound generation at this site 3.

Injection snoreplasty (soft palate sclerotherapy) described sclerotherapy agent injected into the soft palate submucosal. This technique can reduces or eliminates primary palatal snoring by inducing scarring or controlled fibrosis in vibratory area of the soft palate 4. Theoretically, B-vitamins (B1, B6, B12) which are liquid soluble can be use in this technique for treatment of muscular hypotonia. Because of these vitamins contributes the axonal transport, excitability of neurons, or synthesis of neurotransmitters 5.

Injection snoreplasty is cost effective and simple office based procedure and it is performed by injecting 2 mL of 1% or 3% sodium tetradecyl sulfate (STS) with a 27- gauge needle into the midline submucosal plane of the soft palate 4. Ethanol, doxycycline, and hypertonic saline can also use as sclerotherapy agent 6. B-vitamins injected within sclerotherapy agents or separately. Injection must be made to all vibratory palatal area (Figure I).

**Figure 2**

Figure 1: Injection area of B-vitamins and sclerotherapy agent. B-vitamin injection must be made to all vibratory palatal area (black lined palatal area) however sclerotherapy agent infiltrated submucosally in the midline soft palate proximal to the uvula (black filled circle).



In conclusion, using of B-vitamins at injection sclerotherapy may be having additional effect on sclerotherapy agents. Injection snoreplasty can become more effective than others

(pillar implant, palatal radiofrequency) as inexpensive method in treatment of OSA with using of this method. Confirmation of this knowledge required that further investigations and gaining successful studies.

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