# A medical hypothesis: Injection Snoreplasty with B vitamins

M Enoz, H Taninmis

#### Citation

M Enoz, H Taninmis. *A medical hypothesis: Injection Snoreplasty with B vitamins*. The Internet Journal of Otorhinolaryngology. 2007 Volume 7 Number 2.

# 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 previosly reported <sub>1</sub>. 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 <sub>2</sub> (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.

# CORRESPONDENCE TO

Murat Enoz Address: Deniz Abdal Mahallesi, Veled Celebi Sokak, No:42 Isik Apartmani, A Blok, Daire :9, Findikade, Fatih, Postal Code: 34093, ?stanbul, Turkey. Phone: +905554293937 Fax: +902123439040 Email: muratenoz@gmail.com

#### References

1. Lindman R, Stal PS. Abnormal palatopharyngeal muscle morphology in sleep-disordered breathing. J Neurol Sci. 2002 Mar 15;195(1):11-23. 2. Friberg D, Ansved T, Borg K, Carlsson-Nordlander B, Larsson H, Svanborg E. Histological indications of a progressive snorers disease in a upper airway muscle. Am J Respir Crit Care Med. 1998 Feb;157(2):586-93. 3. Enoz M. Triangular uvulopalatal flap. J Otolaryngol. 2007 Apr;36(2):111-2. 4. Brietzke SE, Mair EA. Injection snoreplasty: how to treat snoring without all the pain and expense. Otolaryngol Head Neck Surg. 2001 May;124(5):503-10. 5. Wang ZB, Gan Q, Rupert RL, Zeng YM, Song XJ. Thiamine, pyridoxine, cyanocobalamin and their combination inhibit thermal, but not mechanical hyperalgesia in rats with primary sensory neuron injury. Pain. 2005 Mar;114(1-2):266-77. Epub 2005 Jan 26. 6. Brietzke SE, Mair EA. Injection snoreplasty: investigation of alternative sclerotherapy agents. Otolaryngol Head Neck Surg. 2004 Jan;130(1):47-57.

### **Author Information**

#### **Murat Enoz**

Deparment of ORL & Head and Neck Surgery, Maresal Cakmak Military Hospital

#### Hakan Taninmis

Deparment of Internal Medicine, Cerrahpasa Medicine Faculty, Istanbul University