



Case Report

Barbed suspension bridge pharyngoplasty: A new pathway to better sleep

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Abstract

Barbed Suspension Bridge Pharyngoplasty (BSBP) is a novel, non-resective surgical technique utilizing non-absorbable barbed sutures to treat obstructive sleep apnea (OSA) and snoring by providing a permanent suspension of the soft palate. The procedure aims to prevent posterior palate collapse while preserving natural movement for speech and swallowing, showing high success rates in reducing snoring and improving sleepiness with minimal invasiveness.

Key words: OSA; Pharyngoplasty; Snoring

1. Introduction

Snoring is often laughed off, but for some, it signals a serious sleep disorder — Obstructive Sleep Apnea (OSA). It occurs when the soft palate and throat collapse during sleep, blocking airflow. The Barbed Suspension Bridge Pharyngoplasty offers a simpler, less invasive solution inspired by the design of a suspension bridge.

2. Case Presentation

A 38-year-old man presented with loud snoring, daytime sleepiness, and disturbed sleep. Drug-Induced Sleep Endoscopy (DISE) revealed a complete collapse at the level of the soft palate.

He underwent Barbed Suspension Bridge Pharyngoplasty, where a 2-0 non-absorbable barbed suture was used to lift and support the lower part of the soft palate. The suture acted like the cables of a suspension bridge — holding the palate up between the right and left pterygomandibular raphae. This prevented backward collapse during sleep but allowed free movement during swallowing and speech. The patient recovered quickly and reported marked improvement in sleep and snoring within two weeks.

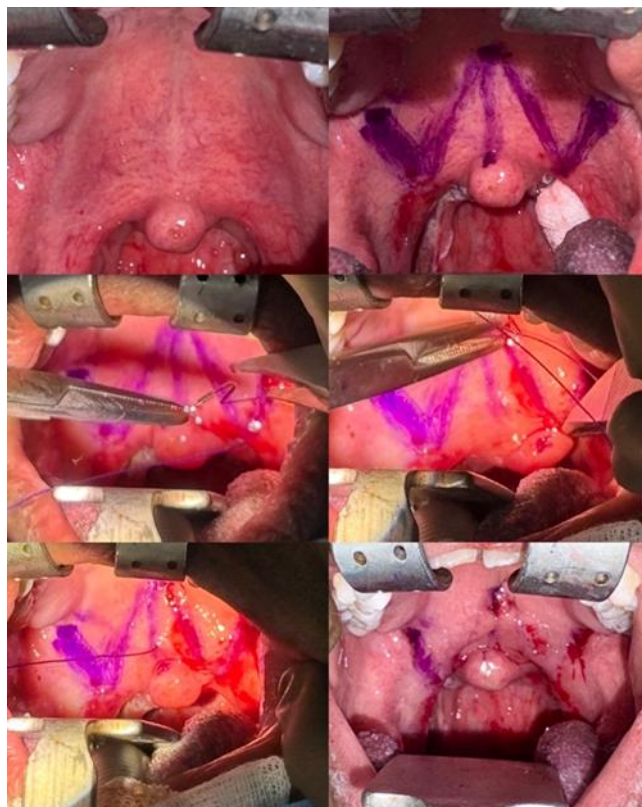
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3. Discussion

This novel technique provides permanent soft palate support without muscle cutting or tissue removal. It reduces surgical trauma and recovery time while maintaining normal palate function. Early outcomes suggest excellent symptom relief with minimal complications.

4. Advantages of Barbed Suspension Bridge Pharyngoplasty

- **Less Invasive:** No muscle cutting or major tissue removal, resulting in gentler healing.
- **Quicker Recovery:** Most patients resume normal eating and routine activities sooner.
- **Permanent Support:** Non-absorbable barbed suture provides long-term stability of the soft palate.
- **Better Airway During Sleep:** Prevents the palate from collapsing backward, reducing snoring and apnea episodes.
- **Preserves Normal Function:** Swallowing, speech, and palate movement remain natural and unrestricted.
- **Reduced Post-Operative Pain:** Knotless barbed suture design minimises tension points and discomfort.
- **Shorter Surgical Time:** Simple technique with less technical demand compared to traditional palatal surgeries.

5. Take-Home Message

The Suspension Bridge Pharyngoplasty is a creative and effective approach to managing snoring and sleep apnoea. It combines science and simplicity to improve sleep quality and overall health — a true bridge to better rest.