

Surgical options in OSA

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Various treatment options are available for obstructive sleep apnea syndromes. The most popular and time tested ones are the BIPAP and CPAP. Surgical options are also available for these patients and it is a moot point whether they are beneficial. There are some studies which state that these operations correct only snoring and not apneas.

Most surgical options are limited to specific sites or segmental areas. Theoretically they may appear very effective or some times sub optimal. Some of the surgeries that are performed are uvulopalatopharyngoplasty, tracheotomy, midline glossectomy, linguloplasty, maxillo mandibular advancement, radiofrequency tissue ablation (RFTA) known as Somnoplasty.

UPPP procedure is a procedure where the airway is enlarged by removing or shortening the uvula along with removal of adenoids and tonsils. Along with this a part of the soft palate and roof of the mouth is trimmed. A more recent way is to do with this the help of the laser called Laser Assisted Palatopharyngoplasty.

A tracheotomy is a procedure where a hole in the trachea after ascertaining the site of obstruction with the help of CT neck and dyanamic MRI studies. It is one of the definitive ways of treating sleep apnea syndrome. This procedure is reserved for those patients whose apnea can not be treated by any other means. The tracheotomy hole is closed during day time which will help in phonation and normal activities and the hole is kept open to prevent the patient from developing apneas and its consequences. One has to be careful about infections.

Laser midline glossectomy and Linguloplasty are other procedures done with varying success. Maxillo Mandibular Advancement surgery is another procedure which is done with great success in some patients. The success rates have been to the extent of 96% . Prinsell JR observed and compared the pre and post polysomnography and reported the results to be very satisfactory (1) In MMA surgery the anterior pharyngeal tissues attached to the maxilla, mandible and hyoid bones are pulled forward. This enlarges the velooropharynx and enhances the neuromuscular tone of the pharyngeal dialator muscles via an extrapharyngeal operation. MMA surgery incorporates an anterior inferior mandibular osteotomy and occasionally nasopharyngeal procedures. The success rate in this technically demanding procedure is to that of nasal CPAP (1)

Another relatively new procedure is Radio Frequency Tissue Ablation (RFTA). It is known as Somnoplasty. It is an office procedure that involves laser burning of the tongue and or soft palate. Multiple sittings are necessary and has to be add on to other modes of therapy.

In conclusion it can be said non surgical means are better and safer methods to manage OSAS. Among surgical options only tracheotomy and MMAs offer best results although the latter is technically more demanding which has to be done by the team of oto rhino laryngologist and plastic surgeon.

Reference

1. **Prinsell JR**, Marietta GA. Maxillomadibular Advancement Surgery for Obstructive Sleep Apnoea Syndrome. *J Am Dent Assoc* 133: 1489-1497, 2002

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