

Long-term outcome of uvulopalatopharyngoplasty on snoring

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Abstract

Objective: to find out the long-term outcome of UPPP on snoring.

Method: we retrospectively looked at 200 case notes for those patients who underwent UPPP in the period from 2000-2004 in our department. We have sent a questionnaire for 200 patients early in 2007. This has meant that the minimum time period after surgery was 2 years which was the cut-off point for our definition of "long-term" in this study. We have asked the snorer and partner as well as other family members about the impact of surgery on snoring.

Results: The respondents were 42%. As a long-term outcome, 59% reported improvement, 18% have remained the same and 23% have reported to have got worse.

Conclusion: we conclude that UPPP is still a viable option for snorers in selected cases.

INTRODUCTION & REVIEW OF LITERATURE

Snoring represents a fair number of complaints in the outpatient clinic setting. Snoring obviously disturbs the partner's sleep; hence it is a social problem. However, it can be a health issue if it is associated with obstructive sleep apnea. Snoring has been viewed and treated by various means of treatment. None of which has proved 100% efficacy. Clinicians, therefore, vary significantly in their practice in terms of offering different modes of treatment for their patients. One surgical method of treatment is uvulopalatopharyngoplasty (UPPP). The literature is replete with studies which talk about the short-term effectiveness of UPPP. In contrast, the long-term outcome of this surgery has been viewed with suspicion by many ENT surgeons. This is partly related to the fact that there are few published studies which address this issue and even these studies differ in terms of their definition of how long after surgery would

mean a "long-term". This has prompted us to conduct this study. In this study, we have set out our definition of "long-term" outcome of UPPP, which is at least two years after surgery.

Iyngkaran et al reported that the long term success of UPPP was 55%. This was through a telephone survey for 168 patients who underwent UPPP with a mean follow-up of 59 months after surgery. ¹

Maheshwar et al reported, on 33 patients, over a 4 year of follow up, that 50% of patients reported reduction in frequency of snoring, 51.85% reported reduction in the volume of snoring and 53.7% reported reduction in disturbance of their partners. Overall, 60.8% felt that surgery was beneficial and has reduced snoring to an acceptable level. ²

Sharp HR and Mitchell DB reported, on 53 patients, that

55% of them to be satisfied with surgery 18-24 months after surgery. When these patients have been followed up for 70 months after surgery, 44% were still satisfied with the outcome of surgery. ³

Neruntarat C has compared the short term (6 months) and long term (3 years or more) success of UPPP on 340 snorers. The long-term success rate in his hand was 75%. Only 12% of patients who have shown some short-term benefit have turned out to fail to derive any long-term benefit. ⁴

Hicklin et al studied 271 patients and found that the long-term (2 years postoperatively) success rate was 45%, which was 76% 6 months after surgery. 61% of his patients stated that they wouldn't have this surgery again. ⁵

Hassid et al has reported a success rate of 53% 5 years post surgery in their retrospective review of 57 patients. He concluded that UPPP is quite successful but the results decline significantly with time and patients should be warned of the possibility of snoring remaining or returning. ⁶

Recently there are many less invasive surgical procedures to treat snoring such as palatal implant and radiofrequency ablation. These two techniques seem to have relatively good outcome and less complications. In addition, they can be performed as office-procedure. ⁷

Nordgard S et al reported on 35 snoring patients upon whom they placed 3 braided polyethylene terephthalate implants in their soft palate. They reported partners' satisfaction to be 70.6% after one year of surgery. ⁸

Hoffman et al 2006 reported that the success rate of radiofrequency ablation of soft palate is less than that of UPPP in treatment of snoring. However, they concluded that due to the minimally invasive character, radiofrequency ablation is suitable as first-step treatment of snoring. ⁹

MATERIAL & METHODS

We have used the code number for the surgery in question (UPPP) and collected the notes accordingly, with the help of our medical records department. We have looked at 250 case notes of the patients who underwent this surgery in our department from 2000-2004. We could not include 50 patients in this study because of poor note-keeping. we have collected the following data of the patients in our study group: age, sex, selection criteria prior to surgery, surgical technique, date of surgery, name of the surgeon and short term postoperative outcome.

The selection criteria for the study group were as follows: all the snoring patients who visited our department had their BMI and Epworth sleepiness score routinely checked. All of them underwent sleep study. The patients with BMI more than 32 and \ or positive for sleep apnoea were not offered surgery.

The employed surgical technique was the classical one with the use of the blade and bipolar diathermy to achieve haemostasis. The tonsils with part of the soft palate including the uvula were excised and the tonsillar pillars were sutured together with absorbable sutures. The patients were routinely followed up in the outpatient clinic 3 and 6 months after surgery. In their last visit to the outpatient clinic, they and their partners were given the same questionnaire (table1), mentioned below, to fill-in, which was kept in their notes.

Uvulopalatopharyngoplasty – Your Opinion

Name:..... Date of
Surgery:.....

Figure 1

Table

6 months after surgery did you feel your symptoms		
Improved	Stayed the same	Got worse
What was your partners opinion		
Improved	Stayed the same	Got worse
Other family member's opinion – please state who		
Improved	Stayed the same	Got worse

The 200 patients who underwent Uvulo-Palato-Pharyngoplasty surgery from 2000-2004 in our department, have been sent out a questionnaire early January 2007.

We have sent, by mail, the following questionnaire which was validated in previous studies (table2).

Uvulopalatopharyngoplasty – Your Opinion

Name:..... Date of
Surgery:.....

Figure 2

Table 2

How do you feel your symptoms are now			
Improved	Stayed the same	Got worse	
What is your partner's opinion			
Improved	Stayed the same	Got worse	
Other family member's opinion – please state who			
Improved	Stayed the same	Got worse	
Depending on your experience, would you recommend this procedure?			
Yes – Definitely	Yes – Probably	Not sure	No

This means that at least two years have passed after the procedure has been undertaken for all the patients included in this study. All the patients were asked whether they felt any improvement in their symptoms or not “now” meaning at the time when they received the questionnaire. They were asked to seek their partner's opinion. In case where there were no partners, they were asked to seek their family members' opinion that share them the same house. They were also asked whether they would recommend this procedure to others or not. 42% of them have responded. We have tried to phone the non-respondents and posted the questionnaire again to them with no success in getting more responses. Two senior surgeons performed the surgical procedure in question (UPPP).

Out of the 84 respondents, 10 family members reported other than the partners.

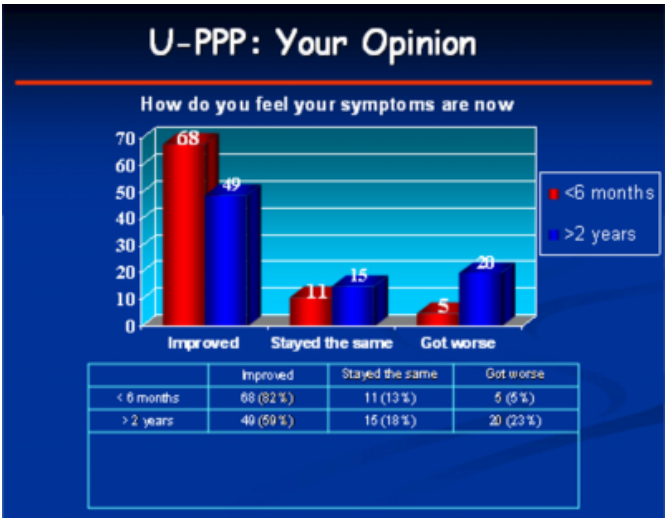
RESULTS

Of the 200 patients in this study, 20 were females (10%) and the rest were males (90%). The ages ranged from 22 to 65 with the mean age of 49. Those who replied were only 84 (42%).

Six months after the procedure, 82% reported improvement in comparison to 59% after 2 years of surgery (Fig.1).

Figure 3

Figure 1

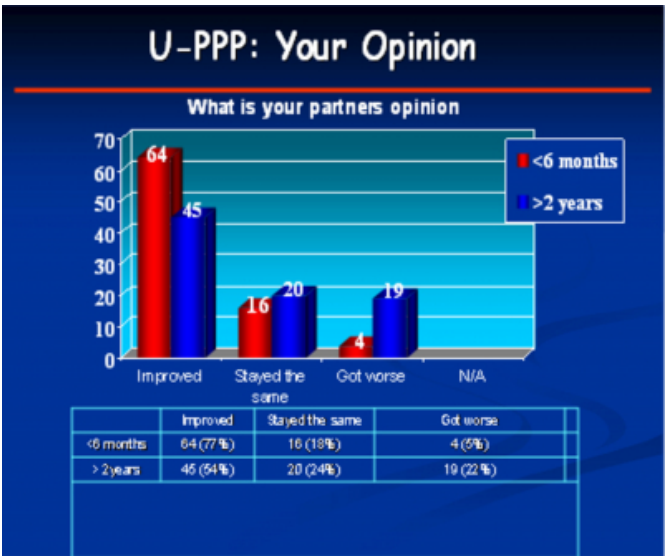


On the other hand, 13% reported that their snoring remained the same six months after surgery which rose to 18% two years postoperatively. Whilst 5% have reported to have got worse six months following the procedure, this percentage has risen to 23% two years post surgery.

In terms of partner's satisfaction, 77% of partners have noticed the improvement of snoring six months after surgery which went down to 54% two years postoperatively (Fig. 2).

Figure 4

Figure 2



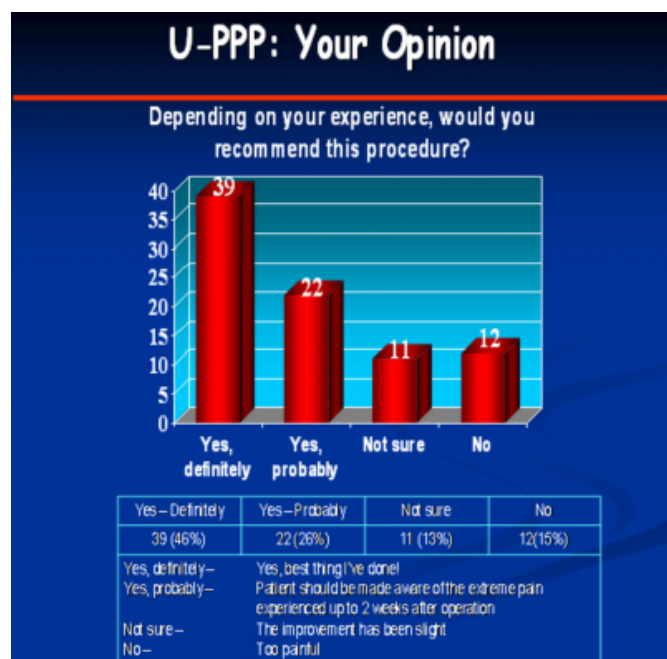
On the other hand, 18% of partners thought that snoring remained the same, as it was, six months after surgery. This number has gone up to 24% two years postoperatively. Whilst 5% of partners thought that snoring has got worse six months after surgery, this number has significantly risen to

22% two years post surgery.

With respect to whether the patients, having gone through the procedure, would recommend it to others or not, 46% of them have answered “yes – definitely”; 26% have answered “yes, probably”; 13% answered “not sure” and 15% answered “no” meaning that they won't recommend it to others (Fig. 3).

Figure 5

Figure 3



One of the most unforgettable symptoms after surgery by most of these patients was the post-operative pain.

DISCUSSION

Young et al reported that snoring affects 22% of women and 44% of men between the ages of 30-60 years.¹⁰ It is due to turbulent flow of air through the upper airway whilst asleep. This could be due to obstruction at several levels. Snoring is a cause of physiological and psychological problems. In its extreme form, it can lead to job loss and marital strain. If associated with obstructive sleep apnea (OSA), it can lead to dysrhythmias, hypertension, COPD and motor car accident.

A range of treatment options are available for patients with snoring. Our study has found out that UPPP is still a viable form of treatment in selected cases. Our study results are, more or less, in accordance with most of the large series, which looked at the long-term outcome of UPPP on snoring. It is quite unexpected to get 42% response rate. Nevertheless, this is only explicable by the fact that it has

become almost a culture in Britain where people move their homes quickly if not emigrating. On the other hand, when we reviewed the case notes of the non-responders, we found no alarming epidemiological difference in comparison with those who responded. We acknowledge the limitations of self-reported measurement of snoring by the patients. We have therefore included their partners in the questionnaire. Regarding the surgical technique, it was the classical technique with the use of a blade and suture. There were two senior surgeons who have performed this type of procedure in our department. We are aware of the ideal situation where one surgeon would provide us with the least bias possible.

We believe that one of the causes of failure of UPPP in improving snoring in our study group, is that tongue base was not taken into account in the surgical procedure.

CONCLUSION

The effect of UPPP on snoring wanes with time. Nevertheless, there are still 59% of patients in our study who think that this surgery is beneficial. Therefore, we believe that UPPP is still a viable surgical option in selected patients with snoring.

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