

## Laser uvulopalatoplasty in local anaesthesia. A safe approach in the treatment of habitual snoring

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Habitual snoring is a prevalent phenomenon, occurring in some 15-30% of middle aged men (Gislason et al., 1988; Cirignotta et al., 1989). When sonorous, the snoring might become threatening to family life and the snorer might chose social isolation rather than risk ridicule and abhorrence. Habitual snoring is foregoing obstructive sleep apnea that is found to be associated with an over-representation of car-accidents, hypertonia, ischemic heart disease and stroke (Partinen, 1985; Koskenvuo et al., 1987; Haraldsson et al., in press). Even before development of complications, such patients may qualify for their own socio-medical diagnosis - heavy snoring disease, caused by partial obstruction of the upper airways during sleep. The demand for surgery will probably increase when expectations of the sufferers are enhanced by the media (Fairbanks, 1989). It is therefore essential to look for an inexpensive, simple and safe method to deal with upper airway obstruction, and thus relieve pressure on E.N.T. Departments, which today are overwhelmed by patients suffering from sleep apnea and snoring.

Uvulopalatopharyngoplasty (UPPP), the predominant surgical treatment modality when the snoring is generated by velopharynx (Fairbanks, 1984; Schaefer, 1989) is not without risk. Although severe bleeding occurs from time to time, most complications are confined to the impact of general anaesthesia. Difficulties in postoperative arousal and respiration, cardiac arrhythmia, postoperative confusion, unreliable airway, all occur, though especially in obese patients with sleep apnea, and even death due to postoperative asphyxia has been reported (Powell, 1988). Subsequent 24 hours observation in an intensive care unit has been suggested as judicious.

Since 1986, we have performed uvulopalatoplasty in habitual snorers with lax palates using a CO<sub>2</sub>-laser. Laser-uvulopalatoplasty, LUPP, which is easily performed under local anaesthesia, is described in detail elsewhere (Carenfelt). The technique used is similar to the conventional one except that tonsillectomy

is omitted. The length of time for this surgical procedure including application of local anaesthesia is, however, less than half that of a conventional UPPP under general anaesthesia. In the first 105 patients (91 men and 14 women) operated at our department, 79% had too long palatal arches and uvulas, whereas tonsils were not considered to be large enough to contribute to obstruction. In 10 cases nasal surgery was performed simultaneously.

The procedure was well tolerated and supplemental general anaesthesia never was required to complete surgery. Hyperreactive vomiting reflexes were not a serious obstacle. Neither troublesome bleeding nor periods of asphyxia during or following the pharyngoplasty were seen, nor did postoperative attacks of confusion occur. None of the patients needed postoperative intensive care observation. At follow-up three months later, mild to moderate oropharyngeal scar tissue was seen in 21 of the 105 patients, but only one exhibited stenosis with nasal obstruction. None of these cases complained from persistent snoring.

The overall results are comparable with those achieved by conventional UPPP with an essentially similar design of palatoplasty (Carenfelt). LUPP under local anaesthesia is worthwhile in patients with sleep apnea, furthermore failure does not prohibit reoperation with conventional techniques.

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