A NEW PHILOSOPHY IN SURGICAL MANAGEMENT OF SNORING: TOLERABILITY AND EFFECTIVENESS OF THE BARBED ROMAN BLINDS TECHNIQUE (BRBT)

Methods and Materials Continued

Twelve (12) patients meeting the entry criteria were submitted to drug-induced-sleep-endoscopy and contextual BRBT under general anesthesia. Patient satisfaction was measured:
- VAS scale snoring
- Linear-analogue-scale (LAS)
- Snoring-scale-score (SSS)
- Daytime sleepiness with Epworth Sleepiness Scale (ESS)
- Polysomnography was repeated 6 months post-operatively.

Methods

A prospective study was carried out at the Ospedale Maggiore Policlinico University of Milan, Italy, from September 2012 to June 2103, after obtaining the ethics committee approval from the institutional review board.

Inclusion criteria for the study were:
- Regular bed-partner
- Chronic, disruptive snoring according to bed-partner with mild obstructive sleep apnea (AHI ≤ 20)
- Thin or normal soft palate
- Evidence of collapse and/or vibration (with prevalence of latero-lateral pattern) localized only at the retropalatal level at sleep endoscopy
- Previous tonsillectomy
- Willing and capable of providing informed consent

Exclusion Criteria:
- Age <18 years and > 65 years
- BMI ≥ 30 kg/m2
- Severe maxillary or mandibular deformities
- Severe or unstable cardiopulmonary, neurological or endocrine diseases;
- Alcohol or illicit drug abuse;
- Unstable and severe psychiatric disease;
- Previous oropharyngeal surgery for OSAS

Surgical Technique

Under general anesthesia with trans-oral endotracheal intubation in supine position, the palate-phyangary structures are exposed with a Dingmann mouth gag. The mucosa covering the posterior nasal spine (PNS), the pterygoid hamuli (PH) and the pterygo-mandibular raphes (PMR) is inmarked.

Surgical Technique Cont’d

The needle, cephalically oriented towards the PH along a spiral way, exits again in the oral cavity. As “back stitch” the last submucosal passage goes from the PH to the initial entry point, 1 cm in front of the posterior nasal spine, here, after proper traction, the thread is cut flush to palate mucosa.

Results

M/F: 8/4.
Age (yrs) (median/range): 47.5 (38.61).
Follow up (mo)(median): 10 (8-15).
No significant morbidities or complications.
Most common complaint was mild swallowing pain with spontaneous resolution within 5-7 days. A stable space-structural remodeling of the velo-uvulo-phyangary tissues was observed; improvement of snoring was confirmed by significant reduction in LAS and SSS (p < 0.05); high VAS satisfaction values and reduction of ESS and AHI were recorded (p < 0.01).

Conclusions

Nowadays the increasing attention to the role of the dis-regulation of the peripheral neuromuscular control of the upper airway as a causative factor of the pharyngeal collapse in OSAS (with the development of sophisticated treatments, such as the neural stimulation of the upper-airway) and the well-known complexity of the functions of the oro-pharyngeal tract make desirable to preserve the muscular structures of the soft palate and LPW in OSAS surgery. BRBT represents an effective, non-resective, reversible, repeatable and well-tolerated procedure to relieve snoring and mild OSAS. Considering the observed reduction of AHI and ESS the role of BRBT in moderate-severe OSAS is now currently under study.

References