The Laryngeal Anterior Commissure Stent for Anterior Glottic Synechiae

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Introduction

- Anterior glottic webs can be congenital or acquired. Congenital webs are rarer while acquired webs are usually related to trauma.
- The treatment of anterior glottic webs can be challenging. Several options have been successfully used - both open and closed.
- Currently, a greater focus on minimally invasive techniques has developed over the last two decades.
- The use of precision laser scanning systems, endolaryngeal instrumentation and trans-oral robotic techniques have been successfully described by several groups internationally.

Aim

We present our experience of a silastic stent (LACS- Laryngeal Anterior Commissure Stent) inserted endoscopically after laser division of these synechiae and aim to discuss the advantages of this minimally invasive treatment option in both children and adults.

Methods

This is a retrospective review of thirty- three cases in Belgium and Luxembourg using a self-made silastic stent initially and thereafter a ready made one. After CO2 laser division and application of mitomycin C, the LACS was inserted endoscopically and secured to the skin of the neck.

Materials

Above left to right: Stages of placement of silastic keel

70 degree angled scope

Lichtenberger needle holder

Mitomycin C

LACS with Prolene suture

Pre-op Anterior Web

Classification of Anterior Webs

	Preoperative values	Postoperative values	p
G	2	1	0.035
R	2	1	0.083
VHI	54	46	0.263
MPT (s)	11.31	11.28	1
PQ (ml/s)	327	395	0.722
FR (Hz)	145	185	0.286
F0 (Hz)	211	222	0.944

Cause	N	%
Transoral cordectomy	15	46
Vocal fold microsurgery	2	6
Laryngeal papillomatosis	6	18
Long-term intubation	3	9
Congenital web	4	12
Idiopathic	3	9

Results

- 1 RRP patient required repeat stenting
- No AGW free
- 1 expectorated stent
- No aspiration
- No damage to anterior commissure
- Average time to stent removal : 21 days
- No immediate or late Post Op complications
- Mean FU 48.39 months (3 – 87)
- No Tracheotomies required

- No recurrence, success 100%
- Pre & Post op assessment :
- Stroboscopy
- VHI
- GRBAS
- Aerodynamic and Acoustic measurements
- Wilcoxon test computed, Significant if p < 0.05

Conclusion

Our results over the last fifteen years have shown that the LACS with mitomycin C can be used successfully in the management of anterior glottic webs in both adults and children with only one case requiring a second procedure and one expectoration of the stent