Is there a role for balloon sinuplasty in treating chronic rhinosinusitis: a tertiary centre's experiences

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INTRODUCTION

Chronic rhinosinusitis is a common problem, the prevalence in Europe has been estimated to be 11%.¹

The use of Balloon sinuplasty has increased in recent years.² One of the main attractions of the devices is their easy of use through the ergonomic designs and the ability to use them in an office setting under local anaesthetic (LA).³ Balloon dilation of the maxillary, frontal, and sphenoid sinuses to treat CRS was first introduced in 2006 and has been shown to be safe and effective.⁴ Over 39,000 ambulatory sinus surgeries are performed per year in the United States.⁴

NICE estimated a potential £7.4 million per year saving for NHS England by 2020 if balloon sinuplasty was adopted in preference to traditional Endoscopic Sinus Surgery (ESS).⁵ This recommendation was based on comparing ESS to balloon sinuplasty performed under LA in a clinic setting.^{6, 7}

METHODOLOGY

Prospective study of all patients who underwent balloon sinuplasty. All patients had pre-operative skin prick testing for common aeroallergens and CT sinuses graded according to the Lund-Mackay scoring system.

Additionally all patients had the following pre & post operatively:

- Visual analogue scores for facial pain, rhinorrhoea and nasal obstruction
- Peak nasal inspiratory flow volumes (NIPF)
- SNOT-23 questionnaire

INCLUSION CRITERIA

- Aged between 18 - 80 years old
- Complaint of facial pain, nasal obstruction, rhinorrhoea or post nasal drip with symptom duration > 3 months
- CT sinus, Lund Mackay Score < 10
- No previous ESS

AIM

To evaluate the efficacy of balloon sinuplasty in the treatment of CRS.

RESULTS

Nasal obstruction was significantly improved by balloon sinuplasty intervention (Table 1). 42% of patients (5/12) had their procedure under LA. In this cohort of patients the surgical aims were fully realised and there were no complications. Anecdotally, all patients reported reduced need of use of CRS medications post operatively.

CONCLUSIONS

- Despite the small sample size, we show there is statistically significant reduction in nasal obstruction and subjective improvements in all other parameters measured.
- Balloon sinuplasty is both therapeutically and cost effective. Performed under LA it is ideally suited to the clinic setting.

Table 1 - Results

	Pre procedure	Post procedure	t test
Nasal obstruction	mean 6.5 (range 5 - 10)	mean 4.6 (range 0 - 10)	3.26 > 2.15 Significant difference (p < 0.05)
Rhinorrhoea	mean 5.6 (range 1 - 10)	mean 4 (range 0 - 10)	0.29 < 2.15 No significant difference
Facial Pain	mean 5.6 (range 0 - 10)	mean 4.7 (range 0 - 10)	0.42 < 2.15 No significant difference
SNOT-23	mean 52.11 (SD 9)	mean 43.83 (SD 6)	0.68 < 2.16 No significant difference
NIPF	mean 95.63 (SD 53.0)	mean 118.57 (SD 49.9)	0.9117 < 2.16 No significant difference

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