

Epistaxis management with hilotherapy: A pilot study

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INTRODUCTION

Epistaxis is the most frequent acute ENT presentation to secondary care⁽¹⁾. The mainstay of management for persistent epistaxis is nasal cautery and packing⁽¹⁾. Ice packs are occasionally used, with intra-oral packs showing a small reduction in blood flow, however external ice application has not been shown to be effective⁽²⁾.

Hilotherm masks are contoured cooling face masks well tolerated by patients, and have been shown to reduce post operative pain and swelling following maxillofacial surgery⁽³⁾. The objective of the pilot study was to assess the tolerability and safety of using the Hilotherm mask in the first line management of epistaxis in the A&E setting.

METHODS

This pilot study was conducted between April 2018 to February 2019 in two hospital in the North West of England. Clinically stable patients with ongoing epistaxis were enrolled in the pilot study (figure 1).

If bleeding continued post hilotherapy, patients were packed or cauterised. Bleeding time was recorded from mask application until complete cessation.

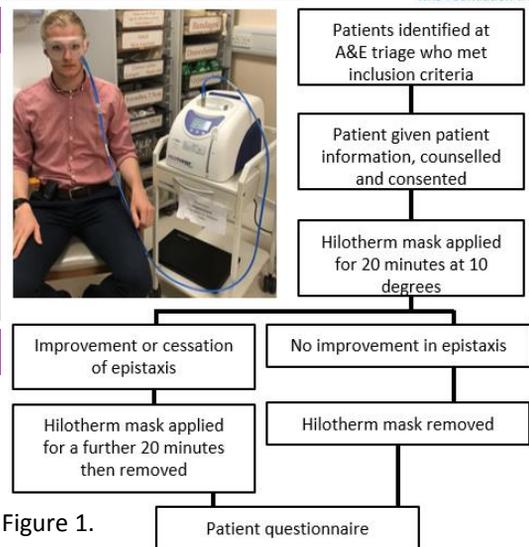


Figure 1.

RESULTS

Data from 13 patients was analysed. The median age of the cohort was 76 years. Five had complete cessation and 6 saw a reduction in bleeding within the first 20 minutes. Median epistaxis cessation time was 37.5 minutes (range 5-85 minutes). Five patients were taking an antiplatelet, 2 NOAC, and 1 low molecular weight heparin. Of these, 1 required nasal cauterisation and 3 required packing with subsequent admission. 3 patients required nasal packing and 1 cauterisation. No adverse effects, patient deterioration or worsening of epistaxis were recorded during hilotherapy treatment.

All 13 patients completed the questionnaire post hilotherapy, with the majority declaring the mask easy to fit, secure, comfortable, and would wear in the future (Figure 2). There was no consensus whether the mask helped with their epistaxis. Participants didn't feel the duration of hilotherm mask application was too long. No patients withdrew from the study while receiving hilotherapy.

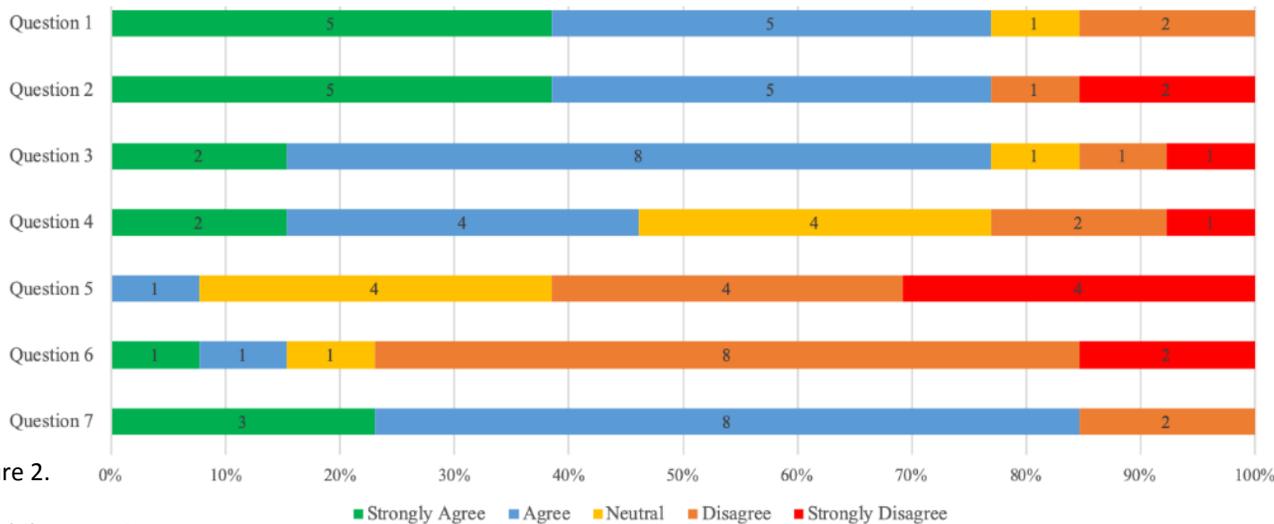


Figure 2.

Post hilotherapy questionnaire

Question: 1. The Hilotherm mask felt easy to fit; 2. Once applied to the face, the hilotherm mask felt secure and in place; 3. The Hilotherm mask felt comfortable to wear; 4. I felt the Hilotherm mask reduced the amount my nose was bleeding 5. The Hilotherm mask caused me discomfort/ felt stressful to wear 6. I felt the Hilotherm mask was kept on for too long 7. If I had a nose bleed again, I would wear the Hilotherm mask again to help.

CONCLUSION

- This pilot study has demonstrated Hilotherm masks are well tolerated by patients and are safe to use for acute epistaxis.
- Hilotherapy provides an excellent alternative to non-standardised methods of ice therapy in the management of epistaxis, as it avoids problems seen from traditional cryotherapy such as ice burns and local ice storage.
- Due to the small numbers and heterogeneous nature of the study population it is currently not possible to identify whether hilotherapy reduces acute epistaxis. However, no patients developed worsening epistaxis or deterioration while on hilotherapy treatment.

References

1. INTEGRATE (The National ENT Trainee Research Network). Epistaxis 2016: national audit of management. J Laryngol Otol 2017; 131: 1131-1141.
2. Teymoortash A, Sesterhenn A, Kress R, Sapundzhiev N, Werner JA. Efficacy of ice packs in the management of epistaxis. Clin. Otolaryngol 2003; 28: 545-547.
3. Bates AS, Knevil GJ. Systematic review and meta-analysis of the efficacy of hilotherapy following oral and maxillofacial surgery. Int J Oral Maxillofac Surg 2016; 45: 110-117.