

Emergency Department Presentations for Epistaxis: Is Undiagnosed or Untreated Obstructive Sleep Apnoea a Risk Factor?

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Background

Epistaxis is one of the most common problems in Medicine which affects about 60% of the population worldwide. However, given that only 10% of patients present to the emergency department (ED) for treatment, this number may be severely underestimated. It causes significant morbidity for patients and places demands on health care resources.

Established risk factors for epistaxis are anticoagulant medications, hypertension and age. The role of obstructive sleep apnoea (OSA) in epistaxis has not yet been thoroughly evaluated. To the authors knowledge, only one previous study has evaluated OSA as a risk factor for epistaxis – patients with known OSA were 1.32 times more likely to present with recurrent epistaxis compared to patients with no OSA.

Aim

This study aims to investigate whether obstructive sleep apnoea (OSA) could be another risk factor for epistaxis.

Method

A single-centre, retrospective review from July 2021 through January 2023 was performed on all patients in Cabrini Hospital, Malvern, who presented with epistaxis to Dr Ross Triolo's practice. Only patients who were at least 18 years of age, diagnosed with epistaxis and underwent a polysomnography (level II) after their epistaxis diagnosis were included. Variables assessed include social demographics, anticoagulants use, hypertension, atrial fibrillation, previous cardioversion, CPAP use and compliance.

Results

76.5% of patients who underwent polysomnography after presenting to an emergency department with epistaxis were found to have previously undiagnosed moderate-severe OSA. The odds ratio (OR) of having epistaxis with previously undiagnosed moderate-severe OSA was 22.750 (CI: 2.114 – 244.868).

Discussion

The association between previously undiagnosed or untreated OSA and epistaxis could be due to:

- The already known associations between OSA and recognised risk factors for epistaxis which include atrial fibrillation/anticoagulant medication, hypertension and age.
- An independent effect on the pathogenesis of epistaxis.
- An exacerbation of the severity of epistaxis.
- An effect on the onset of epistaxis (i.e. starting in the early hours of the morning when primary care is not available).

Testing and treatment for OSA in epistaxis patients has the potential to improve their cardiovascular outcomes. Cardiovascular conditions including refractory hypertension and recurrent atrial fibrillation following catheter ablation/cardioversion (which in most cases will lead to anticoagulant medication) are strongly associated with undiagnosed or untreated OSA according to recent European and American guidelines. It is interesting to note that these two cardiovascular conditions are also well-established risk factors for epistaxis.

Conclusion

Patients presenting to ED with epistaxis have a high prevalence of previously undiagnosed moderate-severe OSA. At this stage it is unclear whether this represents an independent risk factor or is linked via an association with other risk factors (i.e. anticoagulant medication, hypertension, age). The identification and treatment of moderate/severe OSA in epistaxis patients may be relevant to both reducing the likelihood of further nose bleeds and improving patients' cardiovascular outcomes.