Educating patients in self-management of epistaxis in an anticoagulation clinic

Nosebleeds, also called epistaxes, are relatively common. An estimated 60% of people will have at least one epistaxis in their lifetime, with those receiving anticoagulant therapy having a greater risk. One study found that 42% of patients who had epistaxes were taking nonsteroidal antiinflammatory drugs, dipyridamole, or warfarin, compared with only 6% of patients in a control group. A high rate of emergency room (ER) visits has been attributed to epistaxes. One group indicated that 153 (42%) of 364 ER visits were related to epistaxes. Therefore, patients receiving anticoagulation therapy need to be aware of the increased epistaxis risk associated with such medications.

While serious bleeding events associated with anticoagulation therapy require immediate medical attention, minor epistaxes may be resolved at home by the patient or a caregiver using proper first aid. However, studies have found that patients are unaware of proper techniques for managing epistaxes. The authors of one study surveyed 50 patients who went to the ER for epistaxis treatment. Among patients who were not previously treated and educated for epistaxis, knowledge of proper epistaxis management was poor. Only one study has evaluated the effect of pharmacist education on self-management of epistaxis for patients treated with anticoagulants. This survey was designed to assess the effect of pharmacist-provided education on knowledge of proper epistaxis management among patients receiving anticoagulation therapy at an ambulatory care clinic in a managed care setting.

Identifying baseline knowledge of epistaxis management in one's practice can assist with identifying areas for educational intervention. At our practice site, we evaluated patients’ knowledge of proper epistaxis management before and after they received pharmacist-provided education. The print-based knowledge assessment survey was adapted from a previously published survey. Modifications to the original survey included the addition of a question regarding the use of hot and cold compresses to assess patients’ knowledge of the use of cold packs during epistaxis (figure). Age and education level were also included to determine if they played a role in correct or incorrect responses. The survey was pilot tested for two days to ensure readability and consistent education for each patient.

The knowledge assessment survey was completed by patients enrolled in the pharmacist-managed anticoagulation clinic. Included patients were receiving anticoagulation therapy at the time of preeducation knowledge assessment administration (July–August 2003). Patients unable to communicate through written or oral methods and those who discontinued therapy were excluded. Most patients read and completed the knowledge assessment independently. However, assessments were read aloud by researchers for those who requested assistance with reading or seeing the assessment. After completion of the preeducation knowledge assessment, patients were briefly educated (for approximately 3 minutes) by a pharmacist or pharmacy student who used an educational protocol to review the following steps for
proper nosebleed management with the patient:

1. Remain calm.
2. Sit in a chair with head forward, keeping mouth open so that blood or clots will not obstruct airway and to avoid choking.
3. Squeeze sides of nose together at the bridge, below the bone, for about 15 minutes.
4. If possible, place a cold cloth or ice against your nose and face to decrease bleeding. Do not plug or block nostrils.
5. After 15 minutes, release pressure.

Avoid irritation to nose. If bleeding continues, seek medical attention.

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**Figure.** Survey to assess patient knowledge of epistaxis management. Answers are bolded for illustration purposes only.

Please take a moment to fill out the following survey.

**Directions:** For each question, please circle the answer that most closely matches your response.

Have you ever had a nosebleed? Yes  No

Were you educated at this clinic on how to control a nosebleed? Yes  No

If not taught at this clinic, who taught you how to stop your nose from bleeding? (Please circle all that apply)
- Self-taught
- Doctor
- Parents
- Nurse
- Pharmacist
- Media
- Teacher
- Other

(If Other Please Specify): ___________________________

If your nose was bleeding how would you try to stop it?

Would you pinch your nose? Yes  No

If you would pinch your nose where would you do it?
- A—Bridge of Nose
- B—Tip of Nose

Would you plug or block your nostrils? Yes  No

Would you tilt your head backwards? Yes  No

Would you tilt your head forwards? Yes  No

Which of the following would be appropriate? A. Apply a cold compress  
B. Apply a warm compress

What other methods would you use? (Please Specify): _________________________________

What is the highest level of education you have completed? _______________________________

Thank you—Your time is greatly appreciated.
A print description of proper epistaxis management was also provided as a supplement to oral education. Posteducation knowledge assessments, identical to preeducation assessments, were administered approximately six weeks after initial education. All study activities were provided within the context of a regular follow-up anticoagulation visit. Significant improvements (p < 0.05) were detected from preeducation to posteducation knowledge assessments in the following areas: placement of pinch, plugging nostrils, tilting head forward, and tilting head backward. Nonsignificant results were demonstrated in the use of a cold compress.

Overall, the use of a knowledge assessment tool within the practice helped to identify areas of knowledge deficiency for this population regarding proper management of epistaxis. Our results demonstrated that the most common areas of patients' knowledge deficit during preeducation assessment were appropriate pinch placement and head-tilting direction, which resolved upon posteducational assessment. Many patients remarked that they had been previously instructed to tilt the head backward. Pharmacists may use these common misconceptions to target education on proper epistaxis management.

Misinformation concerning epistaxis management was fairly common among respondents before education. Patient education by a pharmacist improved patient knowledge of proper epistaxis management in those patients receiving oral anticoagulation therapy in this setting.


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