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SFORL Guidelines

## Guidelines of the French Society of Otorhinolaryngology (SFORL). First-line treatment of epistaxis in adults

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### ABSTRACT

**Objectives:** The authors present the guidelines of the French Otorhinolaryngology-Head and Neck Surgery Society (SFORL) on first-line treatment of epistaxis in adults.

**Methods:** A multidisciplinary work-group was entrusted with a review of the scientific literature on the above topic. Guidelines were drawn up, based on the articles retrieved and the group members' individual experience. They were then read over by an editorial group independent of the work-group. The guidelines were graded as A, B, C or expert opinion, by decreasing level of evidence.

**Results:** In first-line, clearing out blood-clots and bidigital compression are recommended. In case of persistent bleeding, local anesthesia with a vasoconstrictor is essential before nasal diagnostic and therapeutic procedures. When the origin of bleeding is not anterior, nasal endoscopy is an essential procedure, identifying the bleeding site in most cases. In case of active bleeding, cauterization is recommended but

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is only feasible if the bleeding site is clearly visible. When the bleeding site is not identifiable or the first measures failed, anterior packing may be performed by a non-specialist physician. Epistaxis requires subsequent nasal endoscopy performed by an ENT specialist. Patients should be informed of the measures to be taken in case of epistaxis at home, and the risks associated with the various treatments.

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## 1. Introduction

Epistaxis is a frequent presenting symptom in ENT emergency consultation: in a study of 20,563 adult patients seen in ENT emergency departments in the Paris and Île-de-France area, 11.5% consulted for epistaxis, and 13% of these required hospital admission, including 1 in 10 immediate referrals to intensive care. Epistaxis accounted for 24.57% of admissions overall, as was the most frequent cause of emergency admission [1]. The 2015 report of the French Otorhinolaryngology-Head and Neck Surgery Society (SFORL) provided an update on the pathophysiology, etiology and treatment of epistaxis [2]. The aim of the present paper was to draw up SFORL recommendations on first-line treatment in adults.

## 2. Materials and methods

Guidelines were drawn up by a national multidisciplinary work-group, using the formalized expert consensus methodology for good-practice guidelines set out by the French health authority [Haute Autorité de santé (HAS): <http://www.has-sante.fr>]. A pilot group organized consensus conference logistics, choice of reading group members, and literature analysis based on PubMed search. Each retrieved article was scored 1, 2, 3 or 4 according to decreasing levels of evidence, and each recommendation graded A, B, C or expert opinion, according to the guidelines grading system of the National Health Accreditation and Assessment Agency [Agence Nationale d'Accréditation et d'Évaluation en Santé (ANAES)]. An initial series of guidelines was drawn up, based on a written analysis, and assessed by an editorial group and revised according to the results found in the literature search and comments received.

## 3. Results

Epistaxis usually resolves spontaneously or under simple measures such as clot clearing and bidigital compression; recurrent mild epistaxis, on the other hand, requires specialized ENT management, as it can be resolved by limited local hemostasis. Management of adult epistaxis depends on whether there is active bleeding at the time of consultation.

In 80% of cases, the origin of bleeding is anterior, amenable to local treatment [3] (expert opinion).

Whatever the origin, two interventions are systematic:

- cleansing the nasal cavity or cavities, by nose-blowing or aspiration, of blood-clots that maintain bleeding by local fibrinolysis;
- prolonged (10 minutes) bidigital compression (between thumb and index).

### Guideline

The patient should be informed of how to proceed in case of onset of epistaxis at home: nasal cavity cleansing, head raised slightly forward, anterior bidigital compression for 10 minutes (checked on a clock or watch) (expert opinion).

If these primary measures fail and an anterior bleeding site is clearly visible, cauterization is recommended.

Local anesthesia ahead of hemostasis.

Anesthesia and mucosal retraction are achieved by applying a gauze pack with 5% lidocaine and naphazoline (Xylocaine 5% Naphazoline®), for not more than 30 minutes, to avoid systemic absorption. Lidocaine is contraindicated in epilepsy not controlled by treatment. No specific interaction studies between lidocaine and class-III anti-arrhythmic agents have been reported, but concomitant use calls for caution. Lidocaine can be used alone during pregnancy, at whatever stage.

Local anesthesia associated to vasoconstriction is often enough to stop bleeding, and facilitates examination and any subsequent procedures, such as endoscopy, which is the essential examination, locating the bleeding site in more than 70% of cases [4] (expert opinion), [5] (level of evidence, 3).

### Guideline

Local anesthesia with vasoconstriction is recommended, when not contraindicated, ahead of diagnostic and therapeutic nasal procedures in persistent bleeding (expert opinion).

### Guideline

Even in case of Kiesselbach plexus ectasia, nasal endoscopy is recommended to identify the cause of associated bleeding and guide treatment (grade C).

Chemical cauterization by silver nitrate stick is less aggressive for the mucosa than chromic or trichloroacetic acid. Chemical cauterization can only be applied to the Kiesselbach plexus [3] (expert opinion).

Electric cauterization uses a mono- or bipolar electrode [6] (expert opinion).

The risk of septal perforation after bilateral cauterization is controversial. Some authors perform bilateral chemical cauterization without causing perforation [7] (level of evidence, 3). Bilateral electric cauterization has not been demonstrated to be free of complications, and caution argues against simultaneous application (expert opinion).

HEC® ointment is also frequently used as topical treatment for mild epistaxis. It is marketed in 25 g tubes, not covered by the French national health insurance system. It has a hemostatic, protective and calming effect. It should not be used in case of allergy to any of its components (notably, pyrazole, Peruvian balsam or lanolin) or of infected nasal lesion, and prolonged use is to be avoided. Effects during pregnancy and breast-feeding are poorly known.

After cauterization, humidification (with physiologic saline) and lubrication (with ointment) are recommended, to avoid crust formation and to promote healing.

Several recently published literature reviews recommended cauterization of identified bleeding sites as optimal treatment for

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