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Original article

Epistaxis and conjunctival contamination – are our ENT trainees at risk?

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The aims of this study were to assess the risk of conjunctival contamination with blood during the treatment of epistaxis and to identify if certain patients and treatments may pose a higher risk. Protective eye-wear worn by ENT trainees during the ward management of epistaxis was examined for contamination with blood splashes. This occurred in 18% of cases. The incidence of contamination was higher when two treatment modalities were required and when treating elderly female patients.

Key words: Blood – Conjunctiva – Epistaxis – Risk management

The risk of blood-borne viral infection for surgeons has been well documented over the last decade. At least one case of HIV infection through conjunctival contamination has been recorded.[1] The higher risks of conjunctival contamination during certain otolaryngological surgical procedures are well known and the use of protective eye-wear is recommended.[2,3]

The aims of the study were to assess the risk to junior staff of conjunctival contamination with blood during the treatment of epistaxis and to identify if certain patients and treatments may pose a higher risk.

Materials and Methods

Six ENT senior house officers (SHOs) treated a total of 50 cases of acute epistaxis. The number of patients treated by individual SHOs ranged from 2–12 patients (mean, 8 patients; median, 11 patients). Plain glasses with side flaps were worn during the management of acute epistaxis. The authors examined the glasses and recorded the number of blood splashes on the lenses. Details of treatment modalities used, age and sex of the patient were recorded for each case. Only patients who were actively bleeding were included in the study.

Table 1 Incidence of contamination of protective glasses with blood during the treatment of epistaxis according to the treatment given

Treatment given	Contaminationof glasses	
	No	Yes
Cautery only	12	1
Anterior nasal packing	17	1
Anterior and posterior nasal packing	3	2
Cautery and nasal packing	9	5
Total	41	9

Results

Contamination of the protective glasses with blood occurred in 18% (9/50) of cases. Table 1 shows the incidence of contamination according to the treatment modalities used.

Contamination occurred with all treatment modalities, but the incidence was greater when two treatment

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modalities were required. The number of blood splashes on the glasses ranged from 1–7 (average, 3). In only one case was there contamination of both lenses of the glasses. All the SHOs involved in the study had at least one episode of contamination of their protective glasses.

The age of patients in the study ranged from 18–92 years (mean, 62 years), of whom 29 (58%) were male and 21 (42%) were female. In the 9 cases where contamination occurred, the age range was 60–92 years (average, 79 years). Contamination occurred when treating 4/29 (14%) of male patients and 5/21 (24%) of female patients.

Discussion

The risk of conjunctival contamination with blood during the treatment of epistaxis is high, occurring in nearly one-fifth of cases in this study, and more likely if multiple treatment modalities are required.

It seems that contamination is more likely if the patient is an elderly female. A possible explanation for this is that this patient group is less compliant at following instructions given by ENT staff to minimize the risk of contamination.

All the SHOs involved in the study had at least one episode of blood contamination on the protective glasses. None of the SHOs in the study routinely wore eye protection when treating patients with epistaxis. Reasons cited included the regular use of spectacles, the cumbersome nature of protective glasses or simply forgetting to use them.

The risks of conjunctival contamination during surgical procedures and management of epistaxis have been described previously.[2,3] Carney *et al.*[3] recommended the use of protective clothing including facial protection and, somewhat worryingly, we do not seem to have put their recommendations into practice.

We strongly recommend the routine use of protective glasses as a simple and effective method of minimizing the risk of conjunctival contamination during the treatment of epistaxis.

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