# KNOWLEDGE ABOUT FIRST AID MANAGEMENT OF EPISTAXIS AMONG PATIENTS VISITING OTOLARYNGOLOGY OUTPATIENT OF TERTIARY CARE CENTER

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## ABSTRACT

Objective: To determine the level of knowledge about first aid management of epistaxis among patients visiting outpatient department of ENT at tertiary care center of eastern Nepal and to explore the relationship between knowledge and different socio-demographic variables.

Method: A descriptive, hospital based cross-sectional study was conducted on 384 respondents aged 16 years or above visiting ENT OPD, BPKIHS using consecutive non-probability sampling. Pre-testing of the questionnaire was done in Chitwan medical college, Bharatpur, Nepal. The respondents were interviewed with semi structured interview schedule consisting of 6 questions related to first aid management of epistaxis. Each correct answer was allotted one point, and the total summation of the discrete scores of the different items was calculated. A score of less than 4 was considered poor knowledge, while a score of 5 or more was considered good knowledge.

Result: Most of the respondents (88%) had poor overall knowledge. Less than half people knew about correct body posture and only a third knew that nose should be pinched. Only 13.5% people knew correct head position. 15% respondents with secondary or higher education and about 30% of people engaged in medical education/profession had good knowledge. The level of knowledge was found to significantly associated with level of education (p=0.047) and medical profession/education (p=0.00). It was not associated with age, sex and previous exposure to epistaxis.

Conclusion: The knowledge about first aid management of epistaxis in general population is poor it is not adequate even in the people engaged in medical education or profession.

Keywords: Epistaxis, First aid, Knowledge.

## INTRODUCTION

Epistaxis is defined as bleeding from nose and is one of the most common otorhinolaryngological emergencies worldwide.[1] It is estimated that around 60% of the population experience epistaxis at least once in their lifetime of which only about 6% require medical attention.[2] The management of epistaxis begins with simple first aid measures which include sitting and leaning forward (trotter's position) and pinching the nose over the soft lower part (Hippocratic technique) for about 20 minutes. Mouth should be kept open and any blood in throat/mouth should be spitted out and not swallowed as it is emetogenic. Further medical attention is required only if the bleeding does not stop or recurs.[3]

In most of the cases, epistaxis occurs in an out-of-the hospital setting. Thus it is very important, not only for health professionals but also for general people to understand and know the first aid management of epistaxis. A study done in the United Kingdom reported that only 11.3% of the general public had knowledge of dealing with epistaxis.[4] Lack of knowledge of these simple techniques may lead to excessive blood loss and/ or aspiration of blood which may threaten the life of the patient.

Although much has been written on the treatment of epistaxis, there are only limited studies which document the ignorance of public on this subject, especially on our part of the world. The objective of this study is therefore to determine the level of knowledge about first aid management of epistaxis in general population. This may help to identify the area that should be focused for imparting the health education at primary level.

## MATERIALS AND METHODS

A descriptive, hospital based cross-sectional study was conducted on 384 respondents aged 16 years or above visiting ENT OPD, BPKIHS using consecutive non-probability sampling. Ethical clearance was obtained from Institutional Review Committee, BPKIHS (IRC/2064/020). Pre-testing of the questionnaire was done in Chitwan medical college, Bharatpur, Nepal.

Well-informed written consent was taken from all the respondents before participation. The participants were interviewed by an office assistant oriented for data collection for this research with semi-structured interview schedule consisting of questions related to socio-demographic variables, disease exposure and first-aid management of epistaxis. After data extraction, it was revised, coded, and fed to the statistical software IBM SPSS version 22.There were altogether 6 questions related to first aid management of epistaxis. The level of knowledge was graded on scale of 0-6. For knowledge, each correct answer was allotted one point, and the total summation of the discrete scores of the different items was calculated. The score less than 66% (0–4 points) of the total score was considered to have poor knowledge, while those with a score of 66% or more (5 points or more) were deemed to have good knowledge.

Descriptive analysis based on frequency and percent distribution was done for all the variables, including the knowledge related to first aid management of epistaxis. Kolmogorov -Smirnov (K-S) test was used to assess normality of data. The significant factors associated with knowledge of first -aid management of epistaxis were identified by using Pearson chi-square or fisher exact test at 5% level of significance.

## RESULTS

The socio-demographic characteristics of the respondents is illustrated in table 1 The median (SD) age of the respondents was 32 (13.7) years, ranging from 17 to 79 years. There was a slight female preponderance. About 15% of the respondents were either illiterate or just literate without any formal education while almost two-third of the respondents had secondary or higher education. Of the 384 respondents, around 14% were engaged in medical education or profession and around a third of the total respondents had previously experienced nose-bleed.

Regarding preferred place for management of epistaxis, seven out of every ten patients preferred to visit nearest hospital or a health centre whereas a quarter of the respondents preferred to seek help from a medicine shop/ pharmacy.

Regarding first aid management of epistaxis, majority (88%) had poor overall knowledge. More than half of the respondents did not know correct body posture while only one in eight respondents knew that they should tilt head forward during epistaxis. Similarly, about a third of the respondents knew that nose should be pinched if bleeding occurs. However, if the nose is to be pinched, two-third people would pinch in the lower part of the nose and they would spit out any blood in the throat or mouth (table 2).

Table 1. Socio-demographic Characteristics of the Respondents (n=384)

| Variables | Frequency (%) |
|---|---|
| Age (years) | |
| < 20 | 47 (12.24%) |
| 20-30 | 125 (32.55%) |
| 30-40 | 93 (24.22%) |
| 40-50 | 66 (17.19%) |
| 50-60 | 32 (8.33 %) |
| >60 | 21 (5.47%) |
| Mean 35.44 Median =32, SD 13.7 Max: 79 Min: 17 Inter quartile range: 10 | |
| Gender | |
| Male | 189 (49.22%) |
| Female | 195 (50.78%) |
| Educational Status | |
| Illiterate | 30 (7.81%) |
| Literate (without formal education) | 28 (7.29%) |
| Basic (class 1-8) | 80 (20.83%) |
| Secondary (class 9-10) | 171 (44.53%) |
| Bachelor | 62 (16.15%) |
| Masters | 13 (3.39%) |
| Engaged in Medical education/Profession | |
| Yes | 54 (14.06%) |
| No | 330 (85.94%) |
| Previous episode of epistaxis | |
| Yes | 130 (33.85%) |
| No | 254 (66.15%) |
| Preferred Place for management of Disease | |
| Medical Shop | 98 (25.52%) |
| Nearest Health center | 269 (70.05%) |
| Traditional Healers | 6 (1.56%) |
| Manage at Home | 11 (2.86%) |

Although the overall knowledge about first aid management of epistaxis was poor, significant association was found between level of education and the knowledge (p=0.047). Similarly, respondents involved in medical education or profession had significantly better knowledge (p=0.00). However, no significant association was found with age, sex and previous exposure to epistaxis (table 3).

Table 2. Respondents' knowledge regarding management of epistaxis (n=384)

| Knowledge on | Frequency (%) |
|---|---|
| Correct body posture | 173 (45.05%) |
| Correct head position | 52 (13.54%) |
| Pinching of Nose | 137 (35.68%) |
| Mouth breathing | 162 (42.45%) |
| Spitting out the blood | 263 (68.49%) |
| Area of nose to be pinched | 254 (66.15%) |
| Level of Knowledge | |
| Poor (0-4) | 346 (88.02%) |
| Good (5-6) | 46 (11.98%) |
| Mean =2.71 Median=3 min=0 max =6 | |

Table 3. Association of knowledge of respondents with socio-demographic variables(n=348)

| Variables | Knowledge Level | | Total (N) | P-value |
|---|---|---|---|---|
| | Poor(<5) (%) | Good (≥5) (%) | | |
| Age | | | | |
| < less than Median | 153 (85.5%) | 26 (14.5%) | 179 | 0.160 |
| ≥median and above | 185 (90.3%) | 20 (9.8%) | 205 | |
| Gender | | | | |
| Male | 162 (85.71%) | 27 (14.29%) | 189 | 0.171 |
| Female | 176 (90.26%) | 19 (9.74%) | 195 | |
| Education | | | | |
| Literate and Informal | 54 (93.10%) | 4 (6.90%) | 58 | 0.047* |
| Basic Education | 75 (93.80%) | 5 (6.20%) | 80 | |
| Secondary and above | 209 (85.0%) | 37 (15.0%) | 246 | |
| Engaged in Medical Education/profession | | | | |
| Yes | 38 (72.37%) | 16 (29.63%) | 54 | 0.00* |
| No | 300 (90.91%) | 30 (9.09%) | 330 | |

| | | | | |
|---|---|---|---|---|
| Previous exposure | | | | |
| Yes | 113 (86.92%) | 17 (13.08%) | 130 | 0.623 |
| No | 225 (88.58%) | 29 (11.42%) | 254 | |
| Total | 338 | 46 | 384 | |

* Statistically significant at p-value <0.05

## DISCUSSION

A study done in general public in the UK showed that 11% of the people had good knowledge about first aid management of epistaxis.[4] Another study done in Saudi Arabia found that only 5.3% of the general people had excellent knowledge.[5] In accordance to these studies, we have found that around one in eight (12%) people have good knowledge. This shows the widespread ignorance about the first aid management of epistaxis in general people in Nepal.

In our study, around 15% of the people who had completed secondary or higher education had good knowledge about first aid management of epistaxis and this finding is significantly better compared to the knowledge in less educated people. Similar to this finding, a study by Alasiri AS et al showed 15.5% of the school teachers had good overall knowledge about first aid management of epistaxis.[6] In contrast, a study done by Al-kubaisy et al in 1073 school teachers found good knowledge in 37.4% respondents.[7] Similarly, in another study, out of 377 teachers, 57% knew that head should be tilted and 25% knew correct nose pinching technique.[8] However, in both of these studies, majority of the teachers had undertaken a course to have information regarding first aid. Lack of such course/ training to general people in our setting may explain the ignorance about first aid management even in the well-educated people.

This study found that around 70% of the people engaged in medical education or profession did not have good knowledge about management of epistaxis. This finding is similar to the study of Sowerby L. et al who found that most of the emergency department physicians, residents, nurse and family physicians could not identify correctly the basic first aid measures.[9] Similar study done in 111 junior doctors found that 75% of them lacked confidence in management of epistaxis.[10] Another study done in India found good knowledge about first aid management of epistaxis in about 14% of the medical students.[11] In contrast to these findings, in a study done in clinical staff of Accident and Emergency department in Kenya, more than 90% respondents knew correct nose pinching and more than three-fourth knew correct body and head position.[12] This high level of knowledge may be related to more than 10 years of experience of all the respondents in that study. In our study, although people engaged in medical education or profession had significantly better knowledge than non-medical people, the level of ignorance about first aid management of epistaxis in them is still high. Our study also found that more than 95% people seek advice from a hospital/ health centre or pharmacy in case of nose bleed. Hence we can assume that most of the people would get wrong information regarding management of epistaxis at home. This may be the reason that previous exposure to epistaxis does not have any significant association with level of the knowledge in people.

## CONCLUSION

The knowledge about first aid management of epistaxis in general population is poor it is not adequate even in the people engaged in medical education or profession. Training to medical students and professionals regarding simple first aid measures can raise their knowledge which can be transferred to the general public as well. This study also highlights the need of teaching first aid measures to patients and their attendees who come with epistaxis.

CONFLICT OF INTEREST: None

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