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Research Article

**ASSESSMENT OF FIRST AID MANAGEMENT OF EPISTAXIS  
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Mohammed Taha Fakeih<sup>2</sup>**<sup>1</sup> King Faisal Hospital, Saudi Arabia, <sup>2</sup> Umm Al-Qura University, Makkah, Saudi Arabia.**Abstract:**

**Background:** Epistaxis is the most common ear, nose and throat complaint presenting to an emergency department worldwide, which is defined as a bleeding from inside the nose or nasal cavity. A vast majority of these patients settle with simple standard first aid measures.

**Objective:** The aim of this study was to evaluate knowledge and attitude regarding first aid management of epistaxis among health-related specialties students in Saudi Arabia.

**Methods:** A descriptive cross-sectional study was undertaken among medical specialties students in Saudi Arabia. Data were collected using an online questionnaire tool, with sum of 24 questions.

**Results:** Data was collected from 314 medical specialties students between January and October 2018 by using questionnaires, which were filled electronically. 205 (65.3%) were male and 109 (34.7%) were female. Their age ranged between 18 and 26 years with a mean of  $21.71 \pm 1.56$  years. Only 131 (41.7%) had received a first aid provider certificate. The medical students were the most respondents (52.2%) while (47.8%) were other medical specialties. Majority of the respondents were forth year students. 167(83.1%) respondents said that a nosebleed couldn't be stopped after 10 to 20 minutes of direct pressure is one of the commonest causes to seek for emergency care. The commonest first aid measures reported to be known by respondents when the patients get shocked, were Pinching the nose (86.3%), Nasal packing (78.9%), Putting the patient in supine position with the head lowered (59.8%), giving Anti shock treatment (56.6%) and Putting the patient in supine position with the head backward (42.3%). Regarding the attitude toward the first aid management of epistaxis. The majority (39.4%) of the respondents demonstrate the correct position which is holding the head forward rather than backward. 61.5% of respondents demonstrated the correct site for pinching the nose (soft part), While 38.5% of the respondents demonstrated the incorrect site (bony part). The main source of the respondents' knowledge regarding first aid management of epistaxis was Medical Curriculum (31.2%) followed by the Self-taught (23.2%).

**Conclusion:** The level of Knowledge and attitude regarding first aid management of epistaxis was good among most of the students. Health related specialties students have adequate knowledge on the standard first aid measures of epistaxis.

**Keywords:** Epistaxis, First Aid, Health Related Specialties Students.

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## INTRODUCTION:

Epistaxis is the most common ear, nose and throat complaint presenting to an Emergency department. Epistaxis is a bleeding from inside the nose or nasal cavity. The vast majority of nose bleeds (90%) arise from Little's area on the anterior part of the nasal septum [1]. It is estimated from a Scandinavian survey in 1974 of 410 people that up to 60% of the population will experience one episode of epistaxis in their lifetime and 6% will seek medical attention [2,3]. Other Reports have mentioned an incidence ranging between 10%-60% of populations who have suffered at least one significant episode in their life time [4]. It is clearly evident that the problem of epistaxis constitutes a significant amount to the workload in accident and emergency as well as otolaryngology departments. Whilst some epistaxis episodes may do require an active intervention and even hospital admission, a vast majority of these patients settle with simple standard first aid Measures [5]. The basic first aid management of epistaxis is clearly mentioned in the guidelines. However, many surveys have suggested that these principles are not understood by patients and are not being well conveyed to patients by their doctors [6]. To certain degree, health related specialties students are taught how to handle emergencies in a hospital emergency setting where drugs and other necessities are available. However, the adequate knowledge required for handling an emergency without hospital setting at the site of the accident or emergency may not be sufficient [7,8]. Although many studies have been written on the treatment of epistaxis, the knowledge and attitude of health-related specialties students on this subject have not been documented. The purpose of this study was thus to assess and to promote the adequate knowledge and attitude regarding first aid management of epistaxis among health-related specialties students in Saudi Arabia.

## MATERIALS AND METHODS:

A cross-sectional study was carried out amongst students of medical students in Saudi Arabia. The objectives of this study were to assess knowledge and attitude regarding first aid management of epistaxis among medical specialties students in Saudi Arabia. Student's start from level three enrolled (second academic year) was eligible for the study.

The purpose of the study was explained to the participants. Using an electronic, semi-structured questionnaire collected the data. Which included questions on personal data (age, gender, GPA, specialty, clinical year and residency). Also consistent of 2 section to assess the knowledge and attitude of the students regarding the epistaxis and its first aid management. Data were tabulated by using

Microsoft office Excel sheet, entered and analyzed by using SPSS, version 20.0. Ethical Committee approval was obtained before starting the study. The Chi-square test was used to find out the statistical significance of the differences in the proportions.

## RESULTS:

Out of 314 students participated in this study, 205 (65.3%) were male and 109 (34.7%) were female. medical students were the most respondents (52.2%) while (47.8%) were other medical specialties. Majority of the respondents were fourth year students. (Table 1) Out of 314 students; 164 (52.2%) were from medicine college, 82 (26.1%) from dental college, 37 (11.7%) from pharmacy college and 31 (9.8%) were from applied medical college. The mean age was  $21.72 \pm 1.56$  years (range, 18–26 years). 52 (16.4%) were in second year (level 3 and 4), 62 (19.7%) were in third year (level 5 and 6), 102 (32.4%) in fourth year (level 7 and 8), 49 (15.5%) in fifth year (level 9 and 10) and 49 (15.5%) were in sixth year (level 11 and 12). Their mean GPA was 3.9 with standard deviation 0.63. And 131 (41.7%) of students were received a first aid provider certificate, 183 (58.2%) had not received a first aid course. (Table 1)

Regarding the Knowledge of epistaxis, (239; 76.1%) of the respondents think that epistaxis is an emergent case. Regarding the etiology, (98; 31.2%) of the participants respond that Bleeding Disorder is the commonest cause. Next common cause was Hypertension (57; 18.1%), followed by Injury to nose, including fingernail trauma (42; 13.3%). (Table 2)

The results regarding the knowledge among participants for seeking medical care during the attack Shows that 266 (84.7%) respondents said that a nosebleed cannot be stopped after 10 to 20 minutes of direct pressure is one of the commonest cause to seek for emergency care followed by a nosebleeds become more severe or more frequent 210 (66.8%). (Table 3)

The commonest first aid measures reported to be known by respondents when the patients get shocked, were Pinching the nose (86.3%), Nasal packing (78.9%), Putting the patient in supine position with the head lowered (59.8%), giving Anti shock treatment (56.6%) and Putting the patient in supine position with the head backward (42.3%). (Table 4)

Regarding the attitude toward the first aid management of epistaxis The majority 39.4% of the respondents demonstrate the correct position which is holding the head forward rather than backward and 26.7% overall gave the correct duration of pinching the nose. (Table 5)

The main source of the respondents' knowledge regarding first aid management of epistaxis was

Medical Curriculum (31.2%) followed by the Self-taught (23.2%). (Table 6)

**Table 1: Sociodemographic data**

	N	%
<b>GENDER</b>		
Male	205	65.3%
Female	109	34.7%
<b>COLLEGE</b>		
Medicine	164	52.2%
Dentistry	82	26.1%
Pharmacology	37	11.7%
Applied Medical Sciences	31	9.8%
<b>LEVEL OF EDUCATION</b>		
Level 3 (2st year)	31	9.8%
Level 4 (2nd year)	21	6.6%
Level 5 (3rd year)	29	9.2%
Level 6 (3th year)	33	10.5%
Level 7 (4th year)	46	14.6%
Level 8 (4th year)	56	17.8%
Level 9 (5th year)	25	7.9%
Level 10 (5th year)	24	7.6%
Level 11 (6th year)	31	9.8%
Level 12 (6th year)	18	5.7%
<b>AGE IN YEARS (Mean <math>\pm</math>SD)</b>	21.7 $\pm$ 1.56	
<b>GPA SCORE (Mean <math>\pm</math>SD)</b>	3.9 $\pm$ 0.63	
<b>RECEIVE A FIRST AID PROVIDER CERTIFICATE</b>		
Yes	131	41.7%
No	183	58.2%

**Table 2: Causes of epistaxis**

	N	%
<b>Epistaxis is considered as one of the emergency situations</b>		
Yes	239	76.1%
No	75	23.9%
<b>Most common cause of Epistaxis</b>		
Bleeding disorders	98	31.2%
Hypertension	57	18.1%
Irritation due to allergies, colds, sneezing or sinus problems	26	8.2%
Nasal fracture	23	7.3%
Injury to nose, including finger nail trauma	42	13.3%
Deviated septum	18	5.7%
Overuse of decongestant nasal sprays	26	8.2%
Medications including analgesics and anticoagulant	24	7.6%

**Table 3: When to seek for emergency care**

When to seek for emergency care	N	%
A nosebleed cannot be stopped after 10 to 20 minutes of direct pressure.	266	84.7%
Nosebleeds recur 4 or more times in 1 week after you have tried Prevention measures.	210	66.8%
Nosebleeds become more severe or more frequent.	241	76.7%
After a head trauma	172	54.7%

**Table 4: What should you do if the patient gets shocked?**

What should you do if the patient get shocked	N	%
Pinching the nose	271	86.3%
Nasal packing	248	78.9 %
Put the patient in supine position with the head lowered.	188	59.8%
Put the patient in supine position with the head backward.	133	42.3%
Examine the nose	46	14.6%

**Table 5: Most proper position that patient with epistaxis**

Most proper position that patient with epistaxis	N	%
Sitting with head tilted forward	124	39.4%
Sitting with head tilted backward	84	26.7%
Lying down and elevate the legs	31	9.8%
Lying down with ice pack over the nasal bridge	63	20%
Don't know	12	3.8%

**Table 6: Sources of the respondents' knowledge**

Sources of the respondents' knowledge	N	%
Medical curriculum	98	31.2
Self-taught	73	23.2
First aid course	61	19.4
Media	48	15.3
Guessing	34	10.8

**DISCUSSION:**

Epistaxis is the most common nasal emergency, which defined as acute hemorrhage from the nostril or nasal cavity. It is a frequent emergency condition presented to emergency department. However, the vast majority of patients who present to the ED with epistaxis may treated successfully by an emergency physician by performing first aid management [9]. First aid provider should be able to assess and provide appropriate medical care. So our present study aimed to assess and to promote the adequate knowledge and attitude regarding first aid

management of epistaxis among health related specialties students in Saudi Arabia 2018. The respondents in this study were students from different medical specialties including Medicine, dentistry, pharmacology and Applied Medical Sciences.

It was expected that their levels of education would positively influence the knowledge and the attitude on the first aid management of epistaxis. Regarding the Knowledge of epistaxis, 75.7% of the respondents think that epistaxis is an emergent case and 31.2% of them respond that Bleeding Disorder is the commonest cause of epistaxis. The commonest first

aid measures reported to be known by respondents when the patients get shocked, were Pinching the nose (86.3%), Nasal packing (78.9%), Putting the patient in supine position with the head lowered (59.8%), giving Anti shock treatment (56.6%) and Putting the patient in supine position with the head backward (42.3%). These results were not far from the result of study conducted by P. Mugwe [10], in which the first aid measure known by most of the respondents was pinching the nose (94.0%) and nasal packing (80.6%). Unlike Several studies conducted by Adhikari [11], Ho EC [12], and Klossek [13], found nasal packing to be the most common first line measure used by emergency clinical staff. This may be attributed to lack of adequate knowledge on the first aid measures and lack of training in first aid in previously mentioned studies.

In general, the Knowledge and attitude towards first aid in epistaxis was good, The results of our study showed that The majority (39.4%) of the respondents demonstrate the correct position which is holding the head forward rather than backward and (26.7%) overall gave the correct duration of pinching the nose The Results Similar to the results of P. Mugwe in [10] in which Sixty percent (60%) of respondents described the correct position which a patient with nose bleeding should be placed. In contrast to study done by Strachan<sup>19</sup> only 36% gave a correct position. Regarding the correct site for pinching the nose. Only 44.3 % of respondents demonstrated the correct site, while the majority 55.7% of the respondents demonstrated the incorrect site. In accordance to P. Mugwe in [10] only 38.1% correctly demonstrated pinching the nose at the alae nasi. In general, the attitude of the medical specialties students towards first aid in epistaxis was good.

### CONCLUSION:

The level of Knowledge and attitude regarding first aid management of epistaxis was good among most of the students, and this study shows health related specialties students have adequate knowledge on the standard first aid measures of epistaxis and good attitude to provided first aid to patients presenting with epistaxis.

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