

# Knowledge and attitude regarding first aid management of epistaxis among medical specialties students in Al-madinah , Kingdom of Saudi Arabia , 2016 .

AUTHORS

SahalArabi , NisreenAlbouq, TalalAljerais , Hananneyaz , HashaalAlkhurassi and Bader Alim

## ABSTRACT :

**Background :** Epistaxis is a bleeding from inside the nose or nasal cavity. It is one of the most common otorhinolaryngology emergencies presenting to the accident and emergency departments worldwide

**Objective :** The aim of this study was to assess and to promote the adequate knowledge and attitude regarding first aid management of epistaxis among health related specialties students in Al-Madinah city, Saudi Arabia. **Methods:** A descriptive cross sectional study was undertaken among medical specialties students , Data were collected using an online questionnaire tool , with sum of 24 questions.

**Results :** Data was collected from 201 medical specialties students at Al-Madinah using questionnaires which were filled electronically . medical students were the most respondents (66.2%) while (33.8%) were other medical specialties. Majority of the respondents were Interns . 167(83.1%) respondents said that head trauma is one of the commonest cause to seek for emergency care. The commonest first aid measures reported to be known by respondents when the patients get shocked were giving Anti shock treatment (62.2%) , Putting the patient in supine position with the head lowered (55.2%) , compressing the nose (34.3%) and nasal packing (33.8%) .Regarding the attitude toward the first aid management of epistaxis The majority (80.6%) of the respondents demonstrate the correct position which is holding the head forward rather than backward and 73.6% overall gave the correct duration of pinching the nose .Only 44.3 % of respondents demonstrated the correct site for pinching the nose (soft part), While the majority 55.7% 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(38.3%) followed by the General Practitioner (23.9%).

**Conclusion :** 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.

**Keywords:** Epistaxis, first aid, health related specialties students.



## INTRODUCTION :

Epistaxis is a bleeding from inside the nose or nasal cavity. It is one of the most common otorhinolaryngology emergencies presenting to the accident and emergency departments worldwide<sup>(1)</sup>. Reports have mentioned an incidence ranging between 10%-60% of populations who have suffered at least one significant episode in their life time<sup>(2)</sup>. 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 <sup>(3)</sup>. 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 <sup>(4)</sup> .

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 <sup>(5,6)</sup>.

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 Al-Madinah city, Saudi Arabia.

## MATERIAL AND METHODS :

A descriptive cross sectional study was undertaken among medical specialties students in Al-madinah , Kingdom of Saudi Arabia . The study was conducted between July and October 2016 using a semi structured electronic self-administered questionnaire. The purpose of the study was

## RESULTS:

Data was collected from 201 medical specialties students at Al-Madinah using questionnaires which were filled electronically . medical students were the most respondents (66.2%) while (33.8%) were other medical specialties. Majority of the respondents were Interns . ( Table 1)

Regarding the Knowledge of epistaxis , 74.6 % of the respondents think that epistaxis is an emergent case .

Regarding the etiology, (175 ; 87.1%) of the participants respond that Bleeding Disorder is the commonest cause.

Next common cause was Injury to nose, including a broken nose, or an object stuck in the nose (163 ; 81.1 %) followed

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Table 4). Regarding the attitude toward the first aid management of epistaxis The majority (80.6%) of the respondents demonstrate the correct position which is holding the head forward rather than backward and 73.6% overall gave the correct duration of pinching the nose .

Only 44.3 % of respondents demonstrated the correct site for pinching the nose picture (A) , While the majority 55.7%

**Table 1: Sociodemographic data :**

Gender	Frequency	Percent %
Male	73	36.3
Female	128	63.7

explained to the participants, and online consent was obtained. The data was collected by using an electronic, semi-structured questionnaire. which included questions on personal data (age, gender, speciality , 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.

by hypertension (153 ; 76.1 %) and Blowing the nose very hard, or picking the nose (150; 74.6 %) (Table 2).

The results regarding the knowledge among participants for seeking medical care during the attack Shows that 167(83.1%) respondents said that After head trauma is one of the commonest cause to seek for emergency care followed by a nosebleed cannot be stopped after 10 to 20 minutes of direct pressure 164 (81.6%). ( Table 3)

The commonest first aid measures reported to be known by respondents when the patients get shocked were giving Anti shock treatment (62.2%) , Putting the patient in supine position with the head lowered (55.2%) , compressing the nose (34.3%) and nasal packing (33.8%) as shown in

of the respondents demonstrated the incorrect site picture (B)

The main source of the respondents' knowledge regarding first aid management of epistaxis was Medical Curriculum(38.3%) followed by the General Practitioner (23.9%). (Table 5



A - lower down



B - higher up

<b>Specialty</b>		
Medicine	133	66.2
dentistry	17	8.5
pharmacology	10	5.0
nursery	10	5.0
laboratory science	7	3.5
rehabilitation/ physiotherapy	9	4.5
clinical nutrition	13	6.5
other medical specialties	2	1.0
<b>Level of Education</b>		
1st semester (1st year)	5	2.5
2nd semester ( 2nd year )	19	9.5
3rd semester (3rd year)	33	16.4
4th semester ( 4th year )	37	18.4
5th semester ( 5th year )	18	9.0
6th semester	15	7.5
7th semester	14	7.0
8th semester	5	2.5
Intern	47	23.4
other	8	4.0
<b>Total</b>	<b>201</b>	<b>100</b>

<b>Causes of Epistaxis</b>	<b>No. of respondents</b>	<b>Percentage %</b>
irritation due to allergies, colds, sneezing or sinus problems	122	60.7
Very cold or dry air	115	57.2
Blowing the nose very hard, or picking	150	74.6

the nose		
Injury to nose, including a broken nose, or an object stuck in the nose	163	81.1
Deviated septum	47	23.4
Chemical irritants	74	36.8
Overuse of decongestant nasal sprays	59	29.4
Hypertension	153	76.1
Bleeding disorders	175	87.1
Liver diseases	72	35.8
Dental Causes	20	10.0
Neoplasm	104	51.7
Medication(salicylates, analgesics, anticoagulant)	104	51.7

**Table 2 : Causes of Epistaxis**

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

when to seek for emergency care	No. of Respondents	Percentage (%)
A nosebleed cannot be stopped after 10 to 20 minutes of direct pressure.	164	81.6
Nosebleeds recur 4 or more times in 1 week after you have tried prevention measures.	141	70.1
Nosebleeds become more severe or more frequent.	156	77.6
After a head trauma	167	83.1

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

What should you do if the patient get shocked	No. of Respondents		Percentage (%)	
	Yes	No	Yes	No
Examine the nose	51	150	25.4	74.6
Compress the nose	69	132	34.3	65.7
Put the patient in supine position with the head lowered.	111	90	55.2	44.8
Put the patient in supine position with the head backward .	39	162	19.4	80.6
Nasal packing	68	133	33.8	66.2
Start anti shock treatment.	125	76	62.2	37.8

**Table 5 : sources of the respondents' knowledge**

Source of Knowledge	Frequency	Percent
Medical curriculum	77	38.3
General practitioner	48	23.9
Nurse	7	3.5
workshops	25	12.4
Guessing	44	21.9
Total	201	100.0

## DISCUSSION :

Epistaxis is defined as acute hemorrhage from the nostril, nasal cavity, or nasopharynx. It is a frequent emergency condition presented to emergency department (ED) and usually lead to significant anxiety in patients and clinicians. 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 <sup>(7)</sup>. First aide provider should be able to assess, provide care and direct to 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 specialities students in Al-Madinah city, Saudi Arabia ,2016 .

The respondents in this study were students from different medical specialties including Medicine, dentistry , pharmacology ,nursery ,laboratory science ,rehabilitation/physiotherapy ,clinical nutrition and other medical specialties . It was expected that their levels of education will positively influence the knowledge and the attitude on the first aid management of epistaxis .Regarding the Knowledge of epistaxis , 74.6 % of the respondents think that epistaxis is an emergent case and 87.1% 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 giving Anti shock treatment (62.2%) , Putting the patient in supine position with the head lowered (55.2%) , compressing the nose (34.3%) and nasal packing (33.8%) . These results were not far from the result of study conducted by P. Mugwe in 2014<sup>(8)</sup> ,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 in 2006 <sup>(9)</sup> , Ho EC2008 <sup>(10)</sup> , and Klossek2006 <sup>(11)</sup> , 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 .The results of our study showed that The majority (80.6%) of the respondents demonstrate the correct position which is holding the head forward rather than backward and 73.6% overall gave the correct duration of pinching the nose .Similar to the results of P. Mugwe in 2014<sup>(8)</sup> 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 Strachan19 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 2014<sup>(8)</sup> only38.1% correctly demonstrated pinching the nose at the alaenasi.

In general, the attitude of the medical specialties students towards first aid in epistaxis was good.

#### LIMITATION:

This study was assessing the knowledge and attitude of first aid management OF epistaxis among medical specialties students in Al-Madinah , but not including the other region of Saudi Arabia .Moreover, as the study was performed among medical specialities colleges , the findings in this study cannot be generalized to all colleges in Al-

Madinah . This could be an area for future research studies since there is lacking of researches in this field whether among students or general population .

#### CONCLUSION :

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.

#### REFERENCES :

1. R. Douglas and P. J. Wormald, "Update on epistaxis," *Current Opinion in Otolaryngology and Head and Neck Surgery*, vol. 15,no. 3, pp. 180-183, 2007
2. Petruson B, Rudin R. The frequency of epistaxis in a male population sample. *Rhinology*1975;13(3):129-33.
3. MCGARRY G. W., Moulton C. The first aid management of epistaxis by Accident and Emergency department staff. *Archives of Emergency Medicine*. 1993; 10: 298-300.
4. Tanner R, HarneyMS. The initial management of epistaxis. *Ir Med J*. 2015 Apr;108(4):123-4.
5. Khan A, Shaikh S, Shuaib F, Sattar A, Samani SA, Shabbir Q, et al. Knowledge attitude and practices of undergraduate students regarding first aid measures. *J Pak Med Assoc* 2010;60:68-72.
6. Tekian A. Have newly graduated physicians mastered essential clinical skills? *Med Educ* 2002;36:406-7.
7. Van Wyk FC, Massey S, Worley G, Brady S. Do all epistaxis patients with a nasal pack need admission? A retrospective study of 116 patients managed in accident and emergency according to a peer reviewed protocol. *J Laryngol Otol*. 2007 Mar. 121(3):222-7
8. P. Mugwe<sup>1</sup>, K. J. Kamau<sup>2</sup>and O.K. Nyambaka<sup>3</sup>, Knowledge, Attitude and Practice in First Aid Management of Epistaxis by Accident and Emergency Clinical Staff at Kenyatta National Hospital, ,COSECSA/ASEA Publication -East and Central African Journal of Surgery. March/April 2014 Volume 19 (1)
9. Adhikari P, NM Thapa, BK Sinha. Aetiology and management of epistaxis at TU Teaching Hospital. *Journal of Institute of Medicine*. 2006; 28(2): 23-44.

10. Ho EC, Chan JY. *Front-line epistaxis management: let's not forget the basics.* *JLaryngol Otol.* 2008; 122(7):696-9.
11. Klossek JM et al. *Epistaxis and its management: an observational pilot study carried out in 23 hospital centres in France.* *Rhinology.* 2006; 44(2):151-5.
12. . Strachan D, England J. *First-aid treatment of epistaxis- confirmation of widespread ignorance.* *Postgrad Med J.* 1998; 74(868):113-4.

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