

Assess and evaluate knowledge, attitude and practice of first aid management of epistaxis among general population in Aseer region

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ABSTRACT

Introduction: Epistaxis or nose bleeds is one the most common reported emergencies in the ear, nose and department. Causes of epistaxis varies from being trivial such as nose picking or dry air or trauma to concerning such as infections or elevated blood pressure to life threatening condition such as malignancies. **Methods:** The purposely constructed questionnaire was used for this research. The questionnaire was constructed by the panel of experts, language, psychological, doctors and subject specialist was there in the team. Internal consistencies of the questionnaire was measure through cronbach alpha. **Results:** Cronbach alpha = 0.84. Mean \pm S.D of age of the respondents were 27.8 ± 9.8 . 71.6% were females, 91.5% were belongs to Aseer region, 86.6% were living in village, 77.0% have intermediate level of education, 59.2% were single, 41.6% having health care profession. 51.1% having income less than 5000SAR. **Conclusion:** Most of them rely on internet and social media to gain knowledge regarding home management of epistaxis. This has limitations as they do not get a hands-on experience. Therefore, we recommend that first aid camps and workshops in management of epistaxis should be organized in order to properly educate the general population regarding its home management.

Keywords: Assess, epistaxis, first aid, knowledge, treatment

Introduction

Epistaxis or nose bleeds is one the most common reported emergencies in the ear, nose and department.^[1,2] Causes of epistaxis varies from being trivial such as nose picking or dry air or trauma to concerning such as infections or elevated blood pressure to life-threatening condition such as malignancies.^[3] The incidence of epistaxis is reported to be around 60% in general

population of which 10% require medical attention and somehow related with family care and responsibilities of family physicals.^[4,5] Age wise distribution shows a bimodal pattern with peaks at a younger age (2–10 years) and then later in life (50–80 years).^[6] Based on the site of epistaxis it is classified as anterior or posterior epistaxis. The nose is highly vascular receiving blood supply from two major arteries, the Internal (ICA) and the External Carotid Artery (ECA). Anatomically the most common site of epistaxis is from the Keisselbach's plexus or the Little's area.^[7] Most of the time, epistaxis is spontaneous, benign and self-limiting which can be managed at home by providing appropriate first aid. However, in order to do so, awareness and adequate knowledge

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are required. Epistaxis is a common in Asser region due to its high altitude and a relatively lower oxygen level. There are few studies done of awareness and first aid management of epistaxis in some part of the Kingdom of Saudi Arabia, however, there are very limited awareness studies in general population of Asser region. Moreover, most of them are done of medical students and health care workers. In this view this study was conducted in the general population of Asser region to promote the adequate knowledge and attitude regarding first aid management of epistaxis among them.

Methods

The purposely constructed questionnaire was used for this research. The questionnaire was constructed by the panel of experts, Language, psychological, doctors and subject specialist was there in the team. Internal consistencies of the questionnaire was measure through cronbach alpha. Data was entered in the SPSS ver. 20 software for analysis. Study duration was from January2020 to June2020 Ethical approval was obtained from the King Khalid University.

Ethical consent from each participants were taken. Descriptive statistics, (Mean, S.D, frequencies and percentages) were computed. Chi-square was used to measure the significance differences among the variables. $P < 0.05$ was considered as a significant value. Ethical approval was obtained from King Khalid University 5-4-2020.

Results

Cronbach alpha = 0.84. Mean \pm S.D of age of the respondents were 27.8 ± 9.8 . 71.6% were females, 91.5% were belongs to Asser region, 86.6% were living in village, 77.0% have intermediate level of education, 59.2% were single, 41.6% having health care profession. 51.1% having income less than 5000SAR. [Table 1] 9.4% were suffering from Epistaxis [Figure 1 and Table 2]. 87.8% thought that the first aid measures important for epistaxis management [Figure 2]. 58.5 consider that till the head forward is the best position to stop epistaxis [Figure 3] 54% agreed that apply pressure on the nose can stops epistaxis [Figure 4], 57.9% believed that if bleeding continues for more than 20 minutes then patient should go hospital [Figures 5-7] social media is one of the major source of information regarding this diseases. We have observed significant gender differences while comparing patients of epistaxis [Figure 8].

Discussion

This study was conducted to study the awareness and knowledge of general population towards epistaxis which is an acute condition characterized by bleeding from the nose. Though most of the episodes of epistaxis is benign and can be controlled by basic first aid, the actual sight of blood flowing out of the nose can be intimidating and cause panic. It is for this reason that educating the general population regarding the basic management

Table 1: Demographic variables

	Frequency	Percentage
Are you living in Asser region?		
Yes	844	91.5
No	78	8.5
Gender		
Male	262	28.4
Female	660	71.6
Age (Mean \pm S.D=27.8 \pm 9.8)		
<18	24	2.6
19-29	550	59.7
30-39	168	18.2
40-49	136	14.8
50 or above	44	4.8
Living in		
City	798	86.6
Village	124	13.4
Marital status		
Single	546	59.2
Married	352	38.2
Divorced	16	1.7
Widow	8	0.9
Educational level		
Primary school	8	0.9
Intermediate school	16	1.7
High school	132	14.3
College	710	77.0
Post graduate	56	6.1
Career		
Health care- worker	384	41.6
Non Health care- worker	538	58.4
Monthly income:		
<5000 SR	470	51.1
5000-15000 SR	302	32.8
>15000 SR	148	16.1

Table 2: Gender wise comparison

	Gender* Do suffered from Epistaxis?		Total
	Do suffered from Epistaxis?		
	1=Yes	2 = No	
Gender			
Male	35	227	262
Female	53	607	660
Total	88	834	922

$P=0.003$

of epistaxis is necessary. In our study we found an incidence of about 9%. Although there are few studies that have reported higher incidence as high as 60%, our finding was similar to that of Moran *et al.* who reported an incidence of 7.5%.^[6,8] This wide range of incidence is because the incidence of epistaxis varies with age being more common in pediatric age group. Our study had 97.4% of participant above 19 years of age thus explaining the lower incidence. Most of our participants were graduates and post-graduates therefore, as expected they had a good knowledge towards awareness and basic first aid of epistaxis. Similar finding were reported by Albouq *et al.* and Khalid *et al.* in their studies on medical students.^[9,10] Almost all the participants in our study were

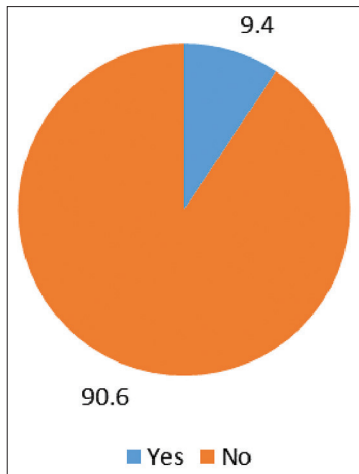


Figure 1: Do you suffered from Epistaxis?

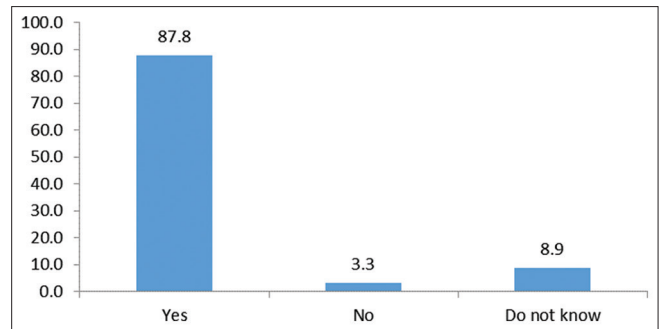


Figure 2: Do you think first aid measures are important for Epistaxis management?

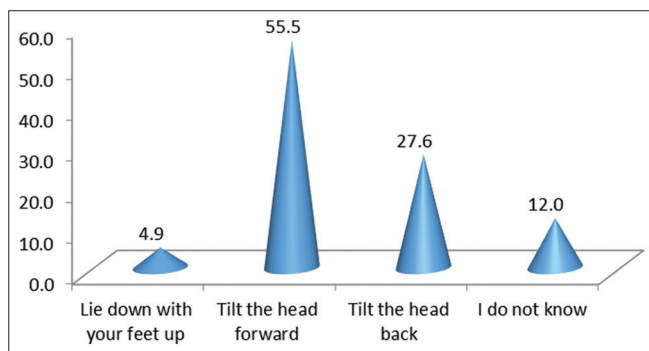


Figure 3: What is the best position to stop Epistaxis?

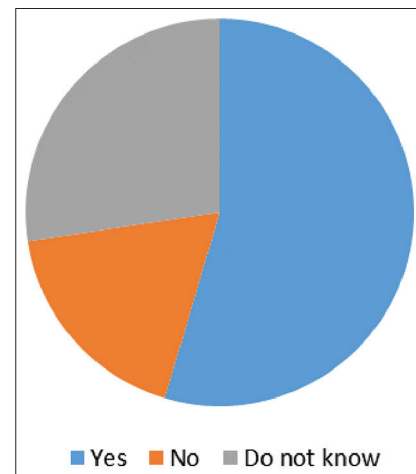


Figure 4: Apply pressure on the nose can stop Epistaxis?

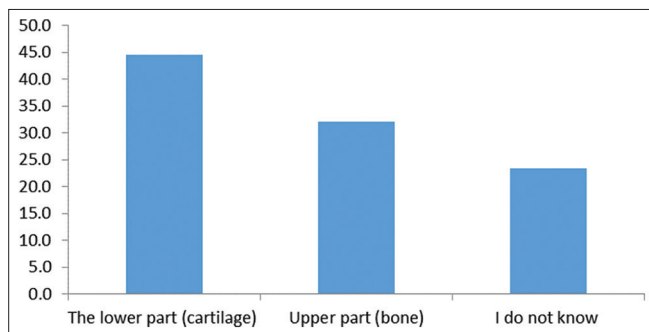


Figure 5: Which part of the nose you will apply pressure on it during epistaxis

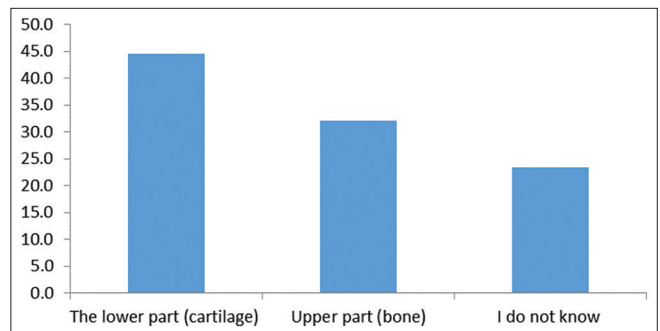


Figure 6: How long you will apply pressure on your nose?

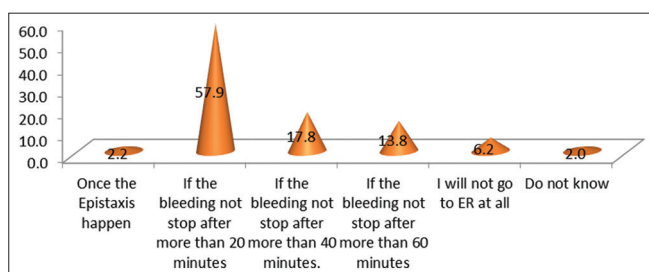


Figure 7: What will be the right time to go to ER?

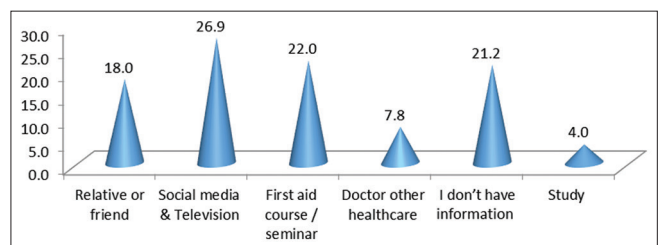


Figure 8: Source of information

aware that knowledge regarding first aid measure are essential and should be known to all. On further probing we found that social

media and television followed by first-aid courses and seminar were the most common sources of their information. Mugwe *et al.* in their study in Kenya reported that You Tube was a common

site for attaining knowledge regarding management of epistaxis but also expressed a concern regarding reliability of such videos.^[11] In order to stop bleeding during an acute episode of epistaxis, the technique of nasal pressure is important. As per that guidelines by Ministry of Health (MOH), Kingdom of Saudi Arabia, proper technique involves holding the lower part (cartilage) of the nose on both sides, with bending forwards. Pressure should be applied for up to 15 mins. If required, ice packs may be applied. However, if the bleeding persists for 30 mins then emergency medical care should be sought.^[12] In this study we observed that only 45% of the participants were aware of the proper site of applying pressure and 55.5% knew to bend a bleeding patient forwards. Regarding the application of proper technique, there is a wide variation in the studies reported. Few studies have shown that about 80% of the participants knew the proper technique.^[9,10] However these studies were done on medical students and hence they were bound to have a better knowledge. In other study by Saleem *et al.* on a general population it was found that only 6% patients knew the correct site and proper technique of applying nasal pressure.^[6] Similar but slightly better findings of 36% awareness of technique was reported by Strachan *et al.*^[13] Around 40% of our participants were health care workers. This can explain why about 40 to 50% of the participants were able to respond positively regarding the technique of nasal pressure.

Conclusion

Our respondents gave a mixed response on first aid management of epistaxis. Although they were aware regarding epistaxis and its first aid management, they were not aware of the proper technique to apply. Most of them rely on internet and social media to gain knowledge regarding home management of epistaxis. This has limitations as they do not get a hands-on experience. Therefore, we recommend that first aid camps and workshops in management of epistaxis should be organized in order to properly educate the general population regarding its home management.

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Conflicts of interest

There are no conflicts of interest.

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