

# AUDIT OF PATIENTS OF EPISTAXIS: TREATMENT MODALITIES AND RELATION WITH BLOOD GROUPS

Ehsan-ul-Haq,<sup>1</sup> Shahzad Hussain Qadri,<sup>1</sup> Irshad-ul-Haq<sup>1</sup>

## ABSTRACT

**Background:** Epistaxis is one of the common conditions faced in emergency. **Objective:** To evaluate the pattern of epistaxis, treatment, modalities and relation of epistaxis with blood groups. **Patients and Methods:** This retrospective study was conducted at department of Ear, Nose, Throat, Head & Neck Surgery, Sheikh Zayed Medical College/Hospital, Rahim Yar Khan from 1<sup>st</sup> January to 31<sup>st</sup> December 2010. Patients with spontaneous severe epistaxis who require hospitalization for control were included in this study and those who were with obvious cause like trauma, rhinolith, foreign bodies, granulomatous condition, tumours, blood dyscrasia and age below one year were excluded from this study. Data regarding age, gender, mode of presentation, underlying cause, blood groups and treatment modalities of consecutive 160 admitted cases of epistaxis was collected and analyzed by manual method and with the help of SPSS version 19. Sixty patients were excluded from this study because of blood dyscrasia, granulomatous disease and tumours. Trauma was not included in this study. To determine the association of blood grouping with epistaxis 100 controls were also included in the study. **Results:** Hypertension above 50 years was the most common cause. It was more common in male patients (72%) as compared to in female. Sixty patients (60%) were above 50 years, twenty (20%) patients were in between (30 to 49) years, nine patients (9%) were in between (10 to 29) years and seven patients (7%) were in between (01 to 09) years of age. Hypertension was observed in sixty (60%) patients, chronic rhinosinusitis in twenty (20%). Eighty five patients (85%) were managed by anterior nasal pack and in fifteen patients (15%) posterior nasal packing was done. Blood group (O) distribution was present in (47%), while in control group it was 38%. **Conclusion:** In adult admitted patients, hypertension was the major cause when trauma, granulomatous disease and blood dyscrasia was excluded. Anterior nasal packing is still valuable in control of epistaxis. Patients with blood group O was found in majority of patients of epistaxis.

**Key words:** Epistaxis, Hypertension, Nasal packing, Blood groups.

JSZMC 2014;5(4):693-695

## INTRODUCTION

All over the world, epistaxis is one of the commonest otorhinolaryngologic emergencies.<sup>1-4</sup> It is also a common problem in Pakistan. Epistaxis develops severe panic in the minds of patients and relatives. Most cases of epistaxis do not have an easily identifiable cause.<sup>5</sup> Both local and systemic pathologies can play a role in it.<sup>6</sup> The bleeding may occur from one or many points particularly Little's area or posteriorly from sphenopalatine artery.<sup>7-8</sup> Treatment of epistaxis encompasses different modalities like correction of septal deviations, cauterization, anterior and posterior nasal packing and vessel ligation.<sup>9</sup> This study was conducted to assess patterns of

epistaxis, treatment modalities and relation with blood groups

## PATIENTS AND METHODS

This retrospective study was conducted in department of Otorhinolaryngology of Sheikh Zayed Medical College/Hospital, Rahim Yar Khan, which is a tertiary care health institution. Consecutive one hundred and sixty admitted patients from 1<sup>st</sup> January 2010 to 31<sup>st</sup> December 2010 were selected in this study. Patients were admitted from out patient department, emergency department, or referred from other departments especially from department of pediatrics. Data was entered in specially designed proforma. Regarding blood grouping, patients presenting with epistaxis were compared with patients without history of epistaxis, who were selected randomly from admitted cases of ENT ward with different diseases. Fifty male and fifty female patients were included as control group. Blood groupings were done for both groups of patients. Out

1. Department of ENT, Sheikh Zayed Medical/Hospital, Rahim Yar Khan, University of Health Sciences Lahore, Pakistan.

**Correspondence:** Dr. Shahzad Hussain Qadri, Assistant Professor, Department of ENT, Sheikh Zayed Medical/Hospital, Rahim Yar Khan, Pakistan

**Email:** skadri591@hotmail.com

**Received:** 04-07-2014

**Accepted:** 18-09-2014

of one hundred and sixty patients, sixty patients (32.27%) had fractures of nasal bone, granulomatous disorders or foreign body nose. They were excluded from this study. Statistical analysis was done by simple manual analysis and with the help of SPSS version 19. Patients with spontaneous severe epistaxis who require hospitalization for control were included in this study and who were with obvious cause like trauma, rhinolith, foreign bodies, granulomatous condition, tumours, blood dyscrasia and age below one year were excluded from this study.

For blood grouping, standard slide method was adopted. A drop of each of the monoclonal antisera (Anti A, Anti B and Anti D) was taken on glass slides. Blood was mixed with each serum separately with the help of separate glass rods. Blood groups were determined on the basis of agglutination reaction within 5 minutes of mixing. Anterior nasal packing and posterior nasal packing was done for management.

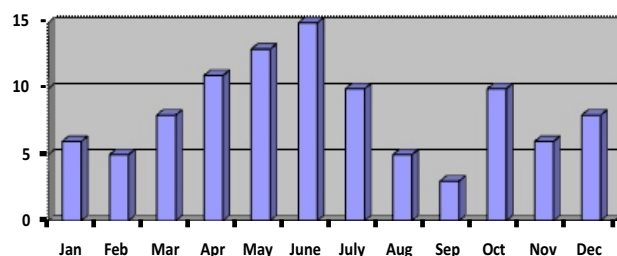
## RESULTS

A total of 100 patients having epistaxis were included for the purpose of analysis of association with blood grouping 100 controls were also included in study. 60% of the patients of epistaxis were above 50 years of age. (Table I). 72% of the patients of epistaxis and 50% of the controls were male

**Table I: Age distribution of epistaxis patients**

Age in years	01 - 9	10 - 29	30 - 49	Above 50	Total
No. Of Cases	7	9	24	60	100
Percentage	7	9	24	60	100

**Figure I: Graph showing trend of epistaxis patients in months**



Highest number of patients reported in a single

month was June. Among the patients with epistaxis O group distribution was present in 47%. While in control patients without epistaxis, it was 38% (Table III). Most of the patients in both groups were blood group O positive. Blood group O was significantly associated with epistaxis. (p value <0.05). (Table II)

**Table II: Blood groups in patients with and without Epistaxis**

Blood Group/patients	A +ve (%)	B +ve (%)	O +ve (%)	AB +ve (%)
Patients with Epistaxis	18%	17%	47%	18%
Patients Without Epistaxis	22%	23%	38%	17%

Regarding etiology, hypertension was the predominant cause in 60% cases. Out of them, 16 patients were taking antihypertensive treatment regularly, 14 patients irregularly and 30 patients were not aware that they has hypertension. Twenty patients (20%) were having recurrent Rhino sinusitis and has habits of picking nose. Deflected nasal septum was diagnosed in fifteen (5%) cases. It was noted that in these cases of septal deflection spur or convex side of deflection was the commonest site of bleeding. In remaining 5% cases cause was not identified.

## DISCUSSION

Epistaxis is the most common ENT emergency worldwide.<sup>10,11,12</sup> Epistaxis is not a diagnosis. It may be a symptom or a sign of some underlying disease. In this study of one hundred cases, male patients were more as compared to female patients (72% and 28%). Hypertension was the predominant cause in 60% of cases followed by chronic rhino sinusitis (20%). Month wise distribution of the cases indicated higher incidences in summer months. Rahim Yar Khan is located in Cholistan desert where in summer season humidity becomes very low which causes dryness in nose and produces creases. Vessel passing through this area ruptures and starts to bleed. This is the most probable cause of increased incidence in summer season. Blood group O patients have more tendency of epistaxis. Blood grouping is based on antigenic property of red blood cells (RBC). According to the presence of these antigens and antibodies blood is divided into four major groups called A, B, AB and O.<sup>12-15</sup>

According to Miller et al,<sup>16</sup> blood group O was associated with a lower expression of von Willebrand

compared with non O blood groups. Individuals with blood group O are more likely to be diagnosed as having a mild form of von Willebrand disease.<sup>16-17</sup> This study revealed that Blood group O is significantly higher in patients with epistaxis as compared with non epistaxis patients (controls), which might be due to the lower expression of von Willebrand factor causing bleeding tendency. Blood group O is known to be associated with a lower expression of von Willebrand factor which plays an important role in clotting. It was significantly higher in patients with epistaxis as compared with non epistaxis. It was suggested that blood group O may be a risk factor in the development of epistaxis.<sup>18,19</sup>

## CONCLUSION

In adult admitted patients, hypertension was the major cause when trauma, granulomatous disease and blood dyscrasia was excluded from the study. Anterior nasal packing was affective in control of epistaxis. Blood group O was found in significant number of patients of epistaxis.

## REFERENCES

1. Kotecha B, Fowler S, Harkness P et al. Management of epistaxis: a national survey. *Ann R Coll Sug Engl.* 1996; 78:444-6.
2. Reddy VM, Daniel M, Bright E, Broad SR, Moir AA. Is there an association between blood group O and epistaxis? *J Laryngol Otol.* 2008; 122:366-8.
3. Adhikari P, Pramanik T, Pradhananga RB. Epistaxis in normotensive individuals may lead to transient hypertension. *Intl. Arch. Otorhinolaryngol.* 2007; 11:149-51.
4. Daniel M, Jaberoo MC, Stead RE, Reddy VM, Moir AA. Is admission for epistaxis more common in Caucasian than in Asian people? A preliminary study. *Clin Otolaryngol.* 2006; 31:386-9.
5. Adhikari P, Pradhananga RB, Thapa NM, Sinha BK. Aetiology and management of epistaxis at TU Teaching Hospital. *J Inst Med.* 2006; 28:2-4.
6. Fuchs FD, Moreira LB, Pires CP et al. Absence of association between hypertension and epistaxis: a population based study. *Blood Press.* 2003; 12:145-8.
7. Kuick CJ, Clenney T. Management of epistaxis. *Am Fam Physician.* 2005; 71:305-11.
8. Pracy R, Siegler J, Stell PM. A short textbook ear nose throat (2nd ed) Kent: ELBS/Hodder and Stoughton, 1986.
9. Christensen NP, Smith DS, Barnwell SL, Wax MK. Arterial embolization in the management of posterior epistaxis. *Otolaryngol Head Neck Surg.* 1993; 133:748-53.
10. Holland S, Thaha MA, Nilseen EL, White PS. Coagulation studies in patients admitted with epistaxis- current practice in Scotland. *J Laryngol Otol.* 1999; 113:1086-8.
11. Adhikari P, Guragain RPS, Pradhananga RB. Is coagulation profile routinely indicated in Epistaxis? *J Inst Med.* 2007; 29:17-8.
12. Keel CA, Neil E, Joels N. Blood groups In: Samson Wright's applied physiology, 13th ed. Oxford UK; Oxford University Press. 1996;46.
13. Ganong WF. Circulating body fluids. In: Review of Medical Physiology, 22nd Ed. Stanford, CT. USA, Appleton and Lange, A Simon and Schuster Co. 2005; 537-542.
14. Guyton AC, Hall JE. Blood. In: Text book of Medical Physiology, 11th ed. USA, WB Saunders Co. 2006; 451-6.
15. Pramanik T, Adhikari P. Trend of blood group distribution among the different ethnic groups of Kathmandu Valley. *Nepal Med Coll J.* 2006; 8:248-9.
16. Miller CH, Haff E, Plast SJ et al. Measurement of von Willebrand factor activity relative effects of ABO blood type and race. *J Thromb Haemost.* 2003; 1:2191-7.
17. Caekebeke- Peerlinck KM, Koster T, Briet E. Bleeding time blood groups and von Willebrand factor. *Brit J Haematol.* 1989; 73:217-20.
18. Halonen P, Linko K, Wirtavuori K, Hastbacka J, Ikkala E. Evaluation of risk factors in intraoperative bleeding tendency. *Ann Chir Gynaecol.* 1987; 76:298-302.
19. Koster T, Blann AD, Brief E, Vandenbroucke JP, Rosendaal FR. Role of clotting factor VIII in effect of von Willebrand factor on occurrence of deep vein thrombosis. *Lancet.* 1995; 345:152-5.