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Pediatric epistaxis - evaluation and management

Dr. Anchal Gupta[1*], Dr. Padam Singh Jamwal[2]
[1]Senior Resident, [2] Professor
Department of ENT, Head and Neck Surgery, SMGS Hospital
Government Medical College, Jammu, Jammu and Kashmir, India

***Corresponding Author:**
Dr. Anchal Gupta
Senior Resident, Department of ENT, Head and Neck Surgery, SMGS Hospital, Government Medical College Jammu, Jammu and Kashmir, India

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ABSTRACT

Background: Epistaxis is a common condition among children

Materials and methods: This retrospective study was conducted in the Department of ENT and Head & Neck Surgery, SMGS Hospital, Jammu from January 2018 to January 2019. All the pediatric patients of age less than 15 years who presented with/had history of nasal bleed were enrolled for the study. The records of age, sex, etiology, anterior rhinoscopy/ diagnostic nasal endoscopy, management were noted.

Results: 40 patients were included in the study the male: female ratio was 1.22: 1The most common age group presenting with epistaxis was 6-10 years accounting for 20(50%) patients. The mean age of presentation was 7.5 years.Most of the children presenting with epistaxis complained of bleeding from right nasal cavity seen in 18(45%).The most common site of bleeding in our study was little's area seen in 22(55%) patients.The most common cause of nasal bleed was idiopathic seen in 12(30%) patients, followed by fingernail trauma seen in 10(25%) patients. Most of the patients were managed by anterior nasal packing done in 14(35%) patients; chemical cauterization of the bleeding point was done in 10(25%) patients. **Conclusion:**

Trauma including nose picking is the most common cause of pediatric epistaxis among all age groups and usually managed well with observation alone. Nasal packing and other invasive treatment modalities are mostly needed in older age group of pediatric patients and those with non-traumatic causes of epistaxis.

Keywords: epistaxis, pediatric, trauma

INTRODUCTION

Otolaryngologists are frequently consulted for the evaluation and treatment of pediatric epistaxis. The majority of cases are self-limited, caused by pathology of theanterior septum, and respond completely to conservative medical therapy.[1] Nonetheless, epistaxis may herald a developing neoplasm, particularly if bleeding is predominantly unilateral and is associated with a history of nasal obstruction.[2] A complete head and neck examination is paramount in eliminating this possibility from the differential diagnosis.

Most cases are due to vascular fragility in the nasal vestibule aggravated by digital trauma, the other causative factors are allergic rhinitis, trauma, infections, anatomical variations, benign and malignant neoplasms and bleeding disorders.[1] Nasal bleeding has been attributed to hot weather, but different studies reveal different seasonal variations.[3,4]

Epistaxis in childhood is a common occurrence, with 64% of children aged 11 to 15 years having had at least 1 episode of epistaxis.[5]

MATERIALS AND METHODS

This retrospective study was conducted in the Department of ENT and Head & Neck Surgery, SMGS Hospital, Jammu from January 2018 to January 2019. All the pediatric patients of age less than 15 years who presented with/had history of nasal bleed were enrolled for the study. The records of age, sex, etiology, anterior rhinoscopy/ diagnostic nasal endoscopy, management were noted. All the patients under went blood investigation complete haemogram, bleeding time, clotting time. The statistical analysis was done for the age group. Other information sought included frequency, duration, and side affected; associated symptoms of nasal congestion, mouth breathing, and headache; a history of trauma; medical and surgical history; and medications, with specific attention to aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs), and nasal steroids.

Personal and family histories of coagulopathy were ascertained.

Statistical analysis

Data was analysed with a statistical software program (SPSS Statistics for Windows version 20, Chicago, IL). All *P* values were calculated with one tail. *P* values below 0.05 were considered significant.

OBSERVATIONS AND RESULTS:

40 patients were included in the study. The following observations were made.

Age and Sex distribution of patients:

Out of 30 patients included in our study, 22 were male patients and 18 were females. The male: female ratio was 1.22: 1.[Figure 1]

The most common age group presenting with epistaxis was 6-10 years accounting for 20(50%) patients. The mean age of presentation was 7.5 years.[Figure 2].

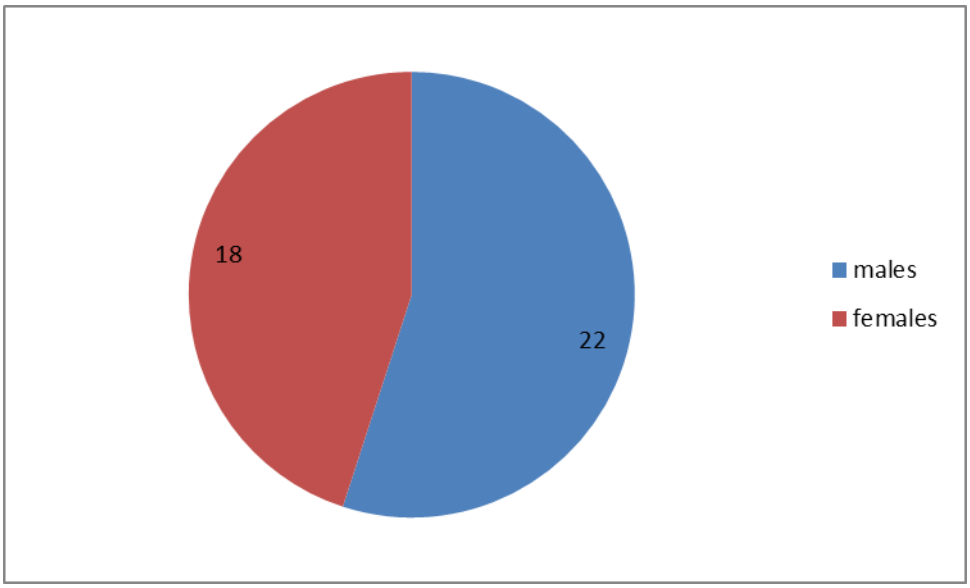

Figure 1: Gender wise distribution of patients

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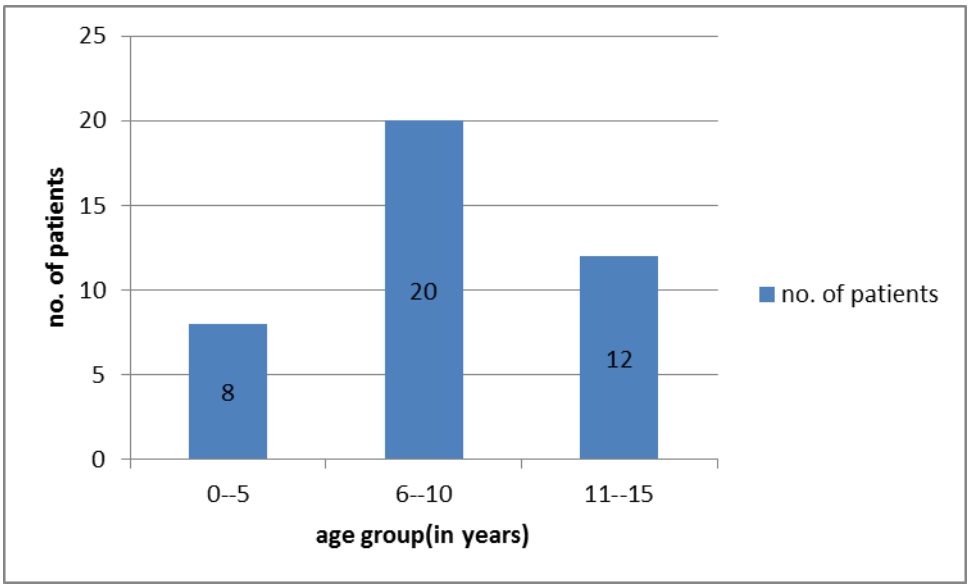

Figure 2: Age wise distribution of patients.

Laterality of epistaxis

Most of the children presenting with epistaxis complained of bleeding from right nasal cavity seen in 18(45%) patients followed by left sided bleed seen in 14(35%) patients and in remaining 8(20%) patients bleeding was from both the nasal cavities.[Figure 3]

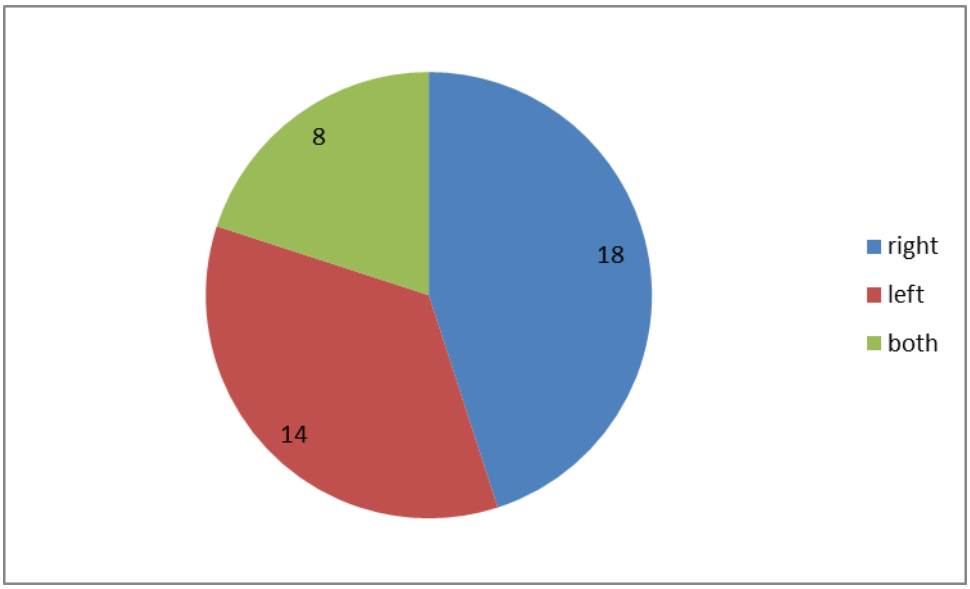

Figure 3: Laterality of nasal bleeding.

Site of bleeding

The most common site of bleeding in our study was little's area seen in 22(55%) patients and it was diffuse in rest 18(45%) patients.

Etiology of nasal bleed

The most common cause of nasal bleed was idiopathic seen in 12(30%) patients, followed by fingernail trauma seen in 10(25%) patients. There were 6(15%) children with nasal bleed due to trauma and upper respiratory tract infection. nasal bleed due to foreign body in nose was seen in 4(10%) patients and due to blood dyscrasia was seen in 2(5%) patients.[Figure 4]

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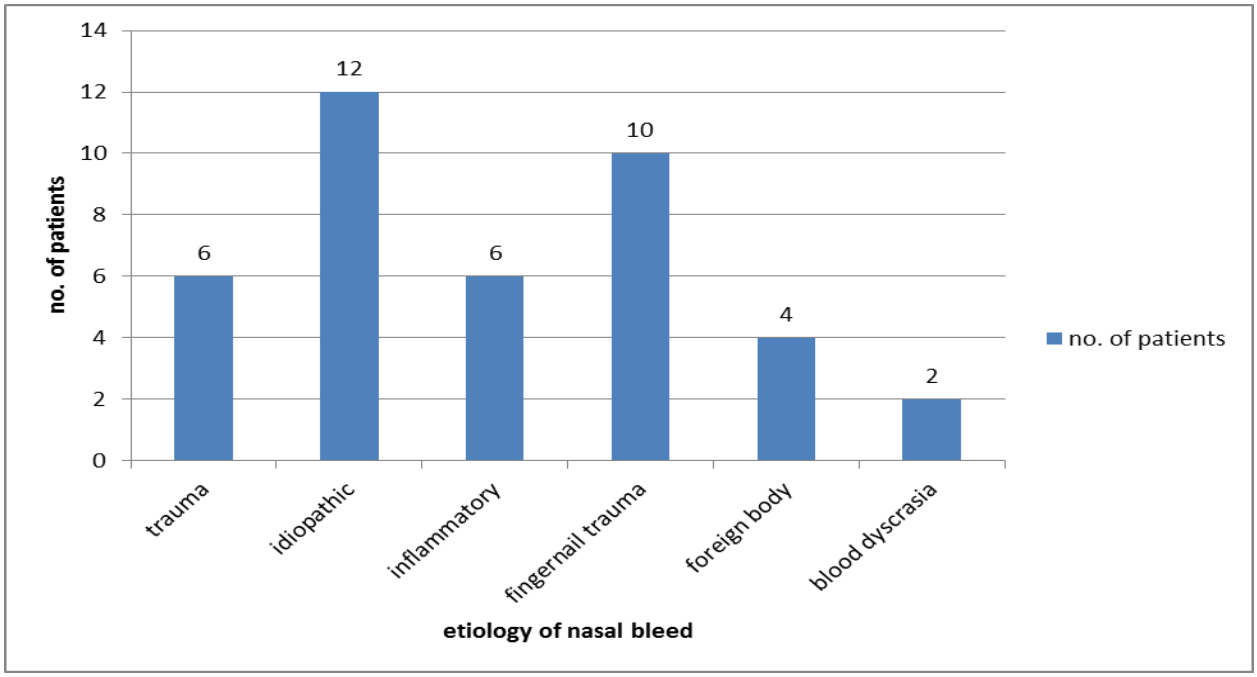

Figure 4: Etiology of epistaxis

Management of epistaxis

Most of the patients were managed by anterior nasal packing done in 14(35%) patients, chemical cauterization of the bleeding point was done in 10(25%) patients. Bleeding was controlled by digital pressure in 7(17.5%) patients, medical treatment in the form of xylometazoline nasal drops controlled bleed in 5(12.5%) patients. The patients in whom the cause of nasal bleed was foreign body in the nose, it was controlled by foreign body removal done in 4(10%) patients.[Figure 5]

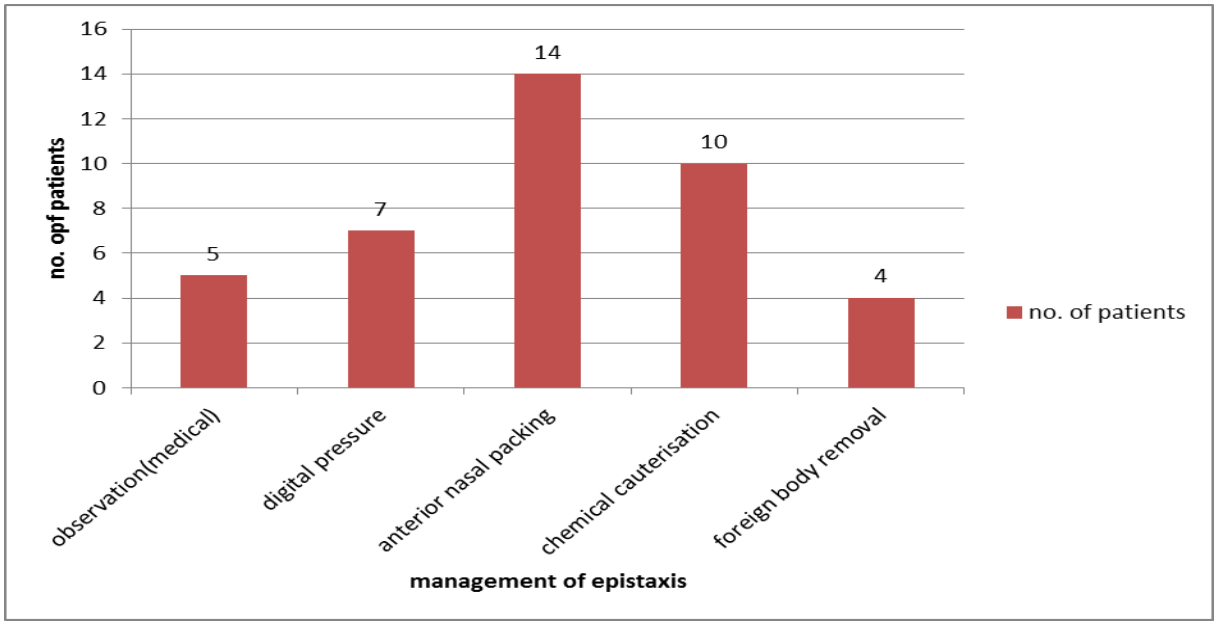

Figure 5: Management of epistaxis

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DISCUSSION

Epistaxis is a common condition in children. Thirty per cent of children under 5 years of age, 56% of those aged 6-10 years and 64% of those aged 11-15 years, have had a least one episode of epistaxis.[5] Males are more commonly affected than females in our study which correlates with other similar studies.[6-8]

The area from where the nasal bleed was from little's area in septum in consistent with study by Varshney et al, Pollice et al.[9,10] The most common cause of nasal bleed was idiopathic seen in 12(30%) patients, followed by fingernail trauma seen in 10(25%) patients. There were 6(15%) children with nasal bleed due to trauma and upper respiratory tract infection. nasal bleed due to foreign body in nose was seen in 4(10%) patients and due to blood dyscrasia was seen in 2(5%) patients. In the study by Watkinson, the majority of children having spontaneous haemorrhage is of venous origin from little's area where number of arteries anastomose forming Kiesselbach's plexus under thin mucosa, with bleeding resulting from region, exposed to dry air or minor trauma. Crusts and scabs form causing itching, which in turn lead to trauma by digital picking.[11]

Frequency distribution for causes of epistaxis looks unique in children as compared with adults. Therefore, identification of the cause is important, as it strongly reflects the management plan.[12]

Most of the patients were managed by anterior nasal packing done in 14(35%) patients, chemical cauterization of the bleeding point was done in 10(25%) patients. Bleeding was controlled by digital pressure in 7(17.5%) patients, medical treatment in the form of liquid paraffin nasal drops and xylometazoline nasal drops controlled bleed in 5(12.5%) patients. The patients in whom the cause of nasal bleed was foreign body in the nose, it was controlled by foreign body removal done in 4(10%) patients.

These findings are similar to the results of the studies by Davies K et al and Damrose JF.[13,7]

CONCLUSION: Epistaxis is acommon clinical condition among the pediatric age group. Fingernail trauma is also one of the common causes of pediatric epistaxis.

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