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AETIOLOGY AND MANAGEMENT OF EPISTAXIS IN CHILDREN

- Prospective Study of a series of 50 cases

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ABSTRACT:

This prospective **s**tudy was conducted on 50 pediatric patients in the age group of 0- 15 years presented with nasal bleed. The study was conducted for a period of one year from July 2009 to September 2010. Descriptions of the patients (age, gender), cause of nasal bleeding, associated clinical features, treatment and results were noted**.** The common causes of epistaxis in children were idiopathic, digital picking, upper respiratory tract infections, and nasal foreign body. Most of the cases responded to conservative measures, in one case surgical treatment had to be done.

Key Words: Epistaxis, Children, Aetiology, Management.

Introduction:

Bleeding from nose is a common condition in ENT practice. Almost 60% of population, at some point of their life experience epistaxis and 6% need medical attention.[1] Nasal bleeding has been traditionally attributed to hot weather, but different studies reveal different seasonal variation.[2,3] Epistaxis is a symptom of many diverse conditions. It is important to locate the site of bleeding in the nose, which can be anterior or posterior bleeding. Anterior bleeding is more common and easy to treat. Aim of the treatment is to control the hemorrhage and prevent the recurrence. It should be cost effective and there should be low complication rate. Treatment can be non surgical or surgical. Non surgical measures include digital pressure, anterior nasal packing, posterior nasal packing, chemical cauterization, electrical cauterization and balloon packing. Surgical procedures include arterial ligation (external carotid, internal maxillary, anterior/posterior ethmoidal), nasal septal reconstruction, and excision of bleeding polyp or growth. This study was undertaken to analyze the, causes, associated clinical features and treatment of epistaxis at our institution.

General Approach:

Initial management includes compression of the nostrils (application of direct pressure to the septal area) continuously for at least five minutes, tilting the head forward prevents blood from pooling in the posterior pharynx, thereby avoiding nausea and airway obstruction. Hemodynamic stability and airway patency should be confirmed. Fluid resuscitation should be initiated if volume depletion is suspected .Every attempt should be made to locate the source of bleeding that does not respond to simple compression and nasal plugging. The examination should be performed in a well-lighted room, with the patient seated and clothing protected by a sheet or gown .The physician should wear gloves and other appropriate protective equipment (surgical mask, safety glasses). A headlamp or head mirror and a nasal speculum should be used for optimal visualization. An epistaxis tray can be created using common supplies and a few specialized instruments. Clots and foreign bodies in the anterior nasal cavity can be removed with a small suction tip, irrigation, forceps, and cotton-tipped applicators. When bleeding is suspected, the general location of the source should be determined. This step is important because different arteries supply the floor and roof of the posterior nasal cavity therefore, selective ligation may be

required. Diffuse oozing, multiple bleeding sites, or recurrent bleeding may indicate a systemic process such as hypertension, anticoagulation therapy, or coagulation disorder. In such cases, a hematologic evaluation should be performed. Appropriate tests include a complete blood count, anticoagulant levels, prothrombin time, partial thromboplastin time, platelet count, blood typing and cross matching.[4,5] Although most patients with epistaxis can be treated as outpatients, hospital admission and close observation should be considered for elderly patients and patients with posterior nasal bleeding, coagulation disorder, significant anemia. Management includes conservative and surgical treatment.

Methodology:

The prospective **s**tudy was done in pediatric patients in the age group of (0-15) years, who attended our outpatient department/emergency department at our hospital with nasal bleed during July 2009 to September 2010. Age, gender, laterality of nasal bleed, distribution of anterior nasal bleed, aetiology, associated symptoms and treatment given were noted. Findings of general physical examination, ENT examination, diagnostic nasal endoscopy, x-ray paranasal sinuses, haematological investigations, causes of epistaxis, method of treatment adopted were noted.

Observations:

Chart 1

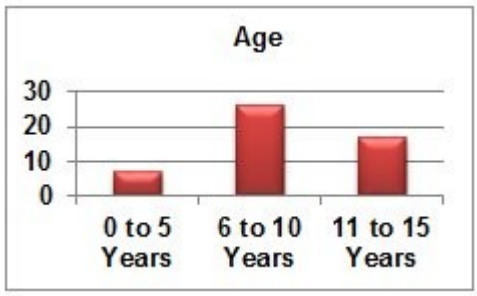

Chart 2

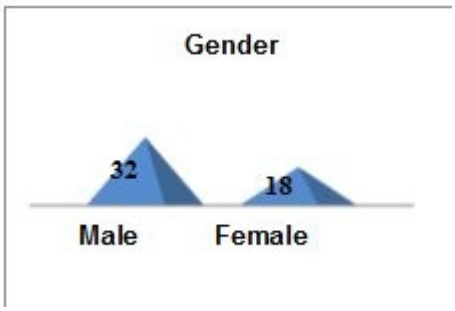

Chart 3

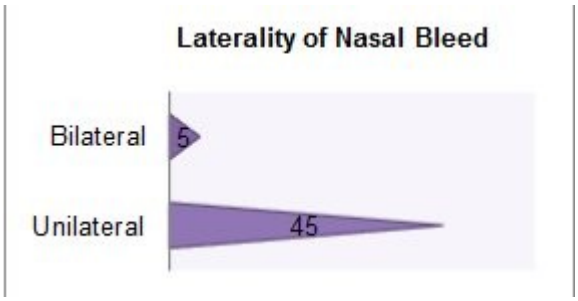

Chart 4

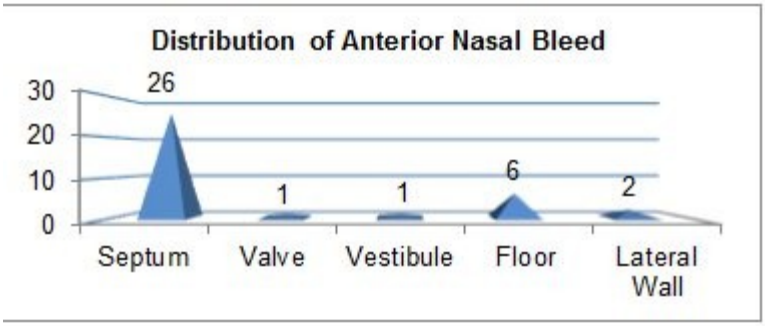

Table No. 1 Aetiology of Epistaxis

Causes	Number
Idiopathic	17
Digital Picking	14
URI	7
Sinusitis	4
Foreign Body	3
Post Adenoidectomy	2
Coagulation Disorder	1
Head Injury	1
Trauma	1

Table No. 2 Associated Symptoms

Associated Symptoms	Number
Discharge	24
Nasal Obstruction	15
Head ache	4
Fever	2
Mouth Breathing	6
Trauma	2

Table No. 3 TREATMENT

Treatment	Regimen
Conservative Treatment for Idiopathic, Digital Picking, URI, Sinusitis, Foreign Body, Coagulation Disorder. (46 Cases)	combination of Digital pressure Local Ciprofloxacin ointment(0.3%w/w)TDS * 5 days Tablet Styptovit BDS * 3days Capsule/Syrup Amoxicillin QID * 5 days Tablet/Syrup Cetrizine OD * 5 days. According to weight of the Child Foreign body removal (3 cases)
Post adenoidectomy bleeding(2 case)	Inj ampicillin IV QID * 5days Inj styptovit IV BD * 1 Day decongestant pediatric nasal drops 2 Drops TDS * 3 days.
Head injury (I Case)	Anterior with posterior nasal packing
Surgical Treatment Septal hematoma (1case) Incision and drainage done under general anaesthesia	Injection Ampicillin IV QID * 1 Week. Injection Paracetamol 1c.c. IM BD * 3 Days.

Discussion:

In this prospective study the aetiology and management of epistaxis in children the results were analyzed as follows:

Age distribution of our study is 0-15 years; it was found that most patients were between 6-10 years (chart 1). Mean age was 8.93 years. Nasal bleed was more common in boys compared with girls (chart 2). Male: Female ratio was 1.7:1. The observation in our study was that the nasal bleed was unilateral in 45 patients and bilateral in 5 patients (Chart 3). 26 patients had bleeding from right nostril, 19 children had

left nostril bleed and bilateral in 5 children. The bleeding site was determined in 36 cases; the anterior nasal bleed site is shown in (Chart 4). Undetermined in 14 cases, includes both anterior and posterior nasal bleed in 1 case and posterior nasal bleed in 2 cases. The most common aetiology for epistaxis in children in our study was idiopathic in 17 cases, followed by digital picking 14 cases and infections in 11 children (upper respiratory tract infection and sinusitis) (Table 1). In our study most frequent number episodes of nasal bleed was one episode in 29 patients. The study comprising of 50 children with epistaxis, we also noted the associated symptoms, the patients with nasal discharge were 24 cases, nasal obstruction 15 cases, headache 4 cases (table 2). 49 patients were treated successfully with conservative management includes 1 by nasal packing, and in 1 case incision and drainage was done (table 3). There were no further episodes of nasal bleed in all the children with a follow up period of 3 months.

Conclusion:

The common causes of epistaxis in children were idiopathic, digital picking, upper respiratory tract infections, and nasal foreign body. Most of the cases responded to conservative measures, in one case surgical treatment had to be done.

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