Frequency and Etiology of Nosebleeds Among Children in Pediatric Out-Patient Clinic of Ain Shams University Hospitals

Thesis

Submitted for Partial Fulfillment of MD Degree in Pediatrics

By

Yasmeen Abd ElAziz Mohammad, MSc.
Pediatrics- Ain-Shams University

Under supervision of

Prof. Mohsen Saleh ElAlfy
Professor of Pediatrics
Faculty of medicine – Ain-Shams University

Prof. Azaa Abdel Gawad Tantawy
Professor of Pediatrics
Faculty of medicine – Ain-Shams University

Prof. Badr Eldin Mostafa Badr Eldin
Professor of Ear, Nose and Throat Surgery
Faculty of Medicine – Ain-Shams University

Prof. Mohamed Amin Mekawy
Professor of Clinical Pathology
Faculty of Medicine – Ain-Shams University

Ass. Prof. Fatma Soliman Elsayed Ebeid
Assistant Professor of Pediatrics
Faculty of Medicine – Ain-Shams University

Faculty of Medicine - Ain-Shams University
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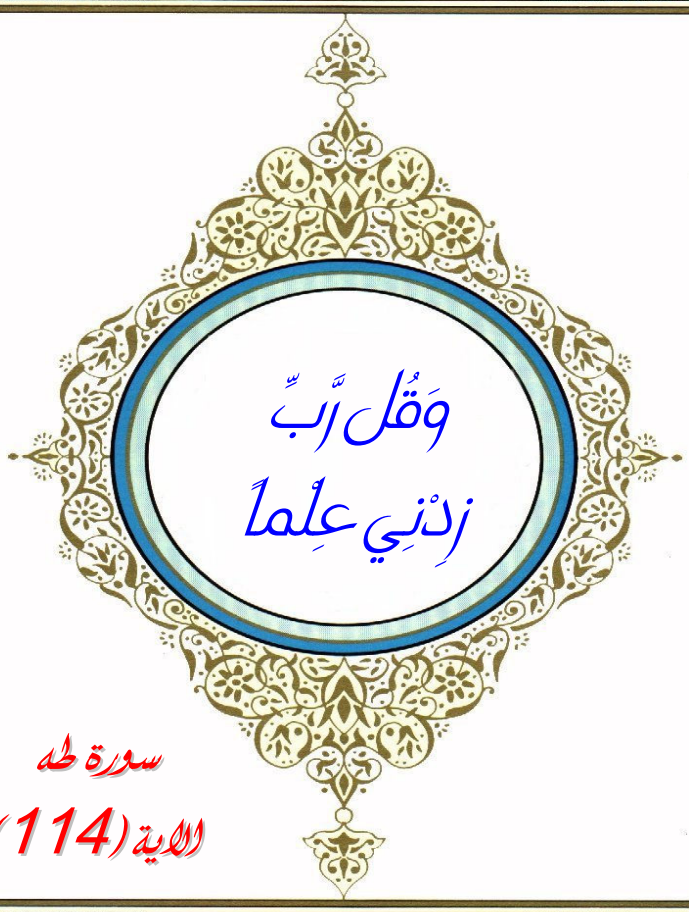

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List of Contents

List of Tables

List of Tables (Cont...)

List of Figures

List of Figures (Cont...)

List of Figures (Cont...)

List of Abbreviations

Abb.	Full term
ADP	*Adenosine diphosphate*
AG	*Antigen*
aPTT	*Activated partial thromboplastin time*
AUC	*Area under curve*
BM	*Bone marrow*
BS	*Bleeding score*
CBC	*Complete blood count*
CNS	*Central nervous system*
DBP	*Diastolic blood pressure*
DDAVP	*1-Desamino-8d-azginine vasopresis*
ED	*Emergency department*
ENT	*Ear, nose and throat*
FWA	*Federal wide assurance*
GT	*Glanzmann's thrombasthenia*
HHT	*Heridteray hemorrhagic talangectasia*
HLA	*Human leukocyte antigen*
HS	*Highly significant*
IBM SPSS	*International statistical package for social science business machine*
IgE	*Immunoglobulin E*
INR	*International normalization ratio*
ISTH	*International society of htormbosis and hemostasis*
ITP	*Immune thrombocytopenic purpura*
K2EDT	*Potassium ethylene diamine tetracetic acid*
LTA	*Light transmission aggregometry*
MPV	*Mean platelet volume*
NS	*Non significance*
PCP	*Primary care physician*

List of Abbreviations (Cont...)

Abb.	Full term
PFD	*Platelet function defect*
PI	*Prothrombin time*
PPP	*Platelet poor plasma*
PRP	*Platelet rich plasma*
P-value	*Probability volume*
RCO	*Ristocetin cofactor activity*
RFD	*Rare factor defeciences*
ROC	*Receiver operating characteristic curve*
S	*Significant*
SP	*Systolic blood pressure*
TT	*Thrombin time*
URRI	*upper respiratory tract infection*
USA	*United states of America*
VwD	*Vonwillebrand disease*
VwF	*Vonwillebrand factor*
WBC	*White blood count*
X2	*Chi square*

INTRODUCTION

Epistaxis, or bleeding from the nose, is a common complaint. Most nosebleeds are benign, self-limiting, and spontaneous, but some can be recurrent. It is rarely life threatening but may cause significant concern, especially among parents of small children ***(Moreau et al., 1998)***.

As it is a common problem among children and represents a common emergency in otolaryngology. It is crucial to diagnose the cause of bleeding being local or secondary to inherited systemic coagulopathy, as it strongly reflects the management plan being totally followed by otolaryngologist or pediatric hematologist ***(Hussain et al., 2006)***.

The true prevalence of epistaxis is not known, because most episodes are self-limited and thus are not reported. When medical attention is needed, it is usually because of either the recurrent or severe nature of the problem ***(Pope et al., 2005).***

There is limited evidence regarding the prevalence of nosebleeds in children. The incidence of epistaxis declines in adulthood, but approximately one-half of all adults with epistaxis had nosebleeds during childhood ***(Beran and Pertruson, 1986)***. Epistaxis is rare in children younger than two years (approximately 1 per 10,000) and should prompt consideration of trauma (intentional or unintentional) or serious illness (e.g. thrombocytopenia) ***(Paranjothy et al., 2009)***. Some

pediatric healthcare providers believe that when a young baby bleeds from the nose, or is reported to have had a nosebleed, child abuse must be considered ***(Weindling, 2010)***.

As regard the data available in Egypt, a study was conducted at Hematology clinic of Ain Shams University Pediatrics Hospital revealed that epistaxis represented 15% of the presenting symptoms of inherited coagulation disorders ***(Mokhtar et al., 2012)*** and reported in 10% of pediatric ITP managed at the same hospital ***(Elalfy, 2013)***.

Another study was conducted at Cairo University to study recurrent epistaxis in children, results showed 47.6% of patients had bleeding disorders, 39.7% had ENT causes, and 12.7% had idiopathic causes. ***(Abdel Wahab et al., 2014)***.

A study was performed at the National Research Centre, Sausan Mubarak children's hospital in Cairo, Egypt and the King Abdul-Aziz University Hospital, Jeddah, Kingdom of Saudi Arabia to study the spectrum of inherited bleeding disorders reported that bruising and epistaxis were the main symptoms in all children with VWD ***(El-Bostany et al., 2008).***

Inherited bleeding disorders include coagulation factors deficiency, platelet deficiency, platelet dysfunction and von Willebrand disease (VWD). Most of severe cases will be diagnosed in an early stage of life, providing the diagnosis is clinically suspected and laboratory diagnostic facilities are

available. However, moderate and mild cases of bleeding disorders may not be detected ***(Katsanis et al., 1988; Bowman et al., 2009)***.

We believe that in our region the prevalence of bleeding disorders is higher than the international prevalence, due to higher rate of marriages with family relatives; however, the exact rate is unknown. This study may increase the diagnosis rate of inherited bleeding disorders in children presented with epistaxis and eventually may improve the care given to those children.

AIM OF THE WORK

1. To measure the frequency of epistaxis as the presenting symptom among children who attended pediatric outpatient clinic.
2. To estimate the severity of epistaxis using severity score as an assessment tool.
3. To determine possible underlying etiology of epistaxis and estimate frequency of secondary epistaxis due to bleeding disorder.
4. Using a pediatric bleeding questionnaire as a screening tool for detecting bleeding tendency in children with epistaxis.