



ORIGINAL RESEARCH ARTICLE

ROLE OF COAGULATION PROFILE IN THE MANAGEMENT OF PATIENT WITH EPISTAXIS

R Parajuli <sup>1\*</sup>, A Ghimire<sup>1</sup>, TR Limbu<sup>1</sup>, R Bhandari<sup>1</sup>, S Thapa<sup>1</sup>, B Tulachan <sup>2</sup>

<sup>1</sup>Department of ENT and Head and Neck surgery, Chitwan Medical College Teaching Hospital, Bharatpur-10, Nepal.

<sup>2</sup>Department of ENT and Head and Neck surgery, Universal College of Medical Sciences, Bhairahawa, Nepal.

\*Correspondence to: Dr. Ramesh Parajuli, Department of ENT and Head and Neck Surgery, Chitwan Medical College Teaching Hospital, Bharatpur-10, Chitwan, Nepal. E-mail: drrameshparajuli@gmail.com

ABSTRACT

Epistaxis is a common emergency in otorhinolaryngology. Most patients with epistaxis don't have an identifiable cause. The role of routine coagulation screening in the management of patients with epistaxis is unclear. The aim of this study was to observe the significance of routine coagulation screening tests in patients suffering from epistaxis. There are various treatment modalities for epistaxis. The study concludes that there is no role for routine coagulation profile in all the patients with epistaxis, which should only be performed when clinically indicated and most of the patients with epistaxis are managed with simple measures.

**Key Words:** Coagulation profile, Epistaxis, Nasal packing.

INTRODUCTION

Epistaxis is defined as the bleeding from inside the nose or nasal cavity. It is one of the most common emergencies in otorhinolaryngology worldwide and often requires admission to the hospital.<sup>1</sup> Epistaxis constitute a major trouble to the patients and treating doctors. Epistaxis (nosebleed) can be due to both systemic and local factors, beside this there is a vast majority of patients in whom no identifiable cause is found and is labeled as "idiopathic". There are various treatment modalities for the patient with epistaxis such as local pressure, anterior and posterior nasal packing, chemical or electric cautery, embolisation and ligation of vessels. Epistaxis may be a sign or symptom rather than a diagnosis itself. While managing the patient with epistaxis the possibility of an underlying bleeding disorder shouldn't be ignored, as it responds to replacement therapy by plasma or deficient factors. The role of routine coagulation profile in patients with epistaxis, who doesn't have history suspicious of bleeding disorder, is not clear. There is lack of information in the recent literature regarding the routine coagulation screening in patients with epistaxis. Some authors suggest that routine coagulation tests are of little value in the absence of firm indications.<sup>2,3</sup> Still in many hospitals, coagulation studies are routinely ordered either as a part of policy of department or by family physician/medical officers from emergency department.<sup>4</sup>

The aim of this study was to find the role of coagulation profile in the management of patients with epistaxis.

MATERIALS AND METHODS

This was a prospective study performed in patients presenting to the Emergency Room (ER) and ENT outpatient department

(OPD) at Chitwan medical college teaching hospital. The study period was 1 year (May 2013 to April 2014). All the patients who had presented with spontaneous onset of nasal bleeding were included in this study. Patient with history of trauma to the nose, local nasal pathology, systemic diseases (liver or kidney diseases), malignancy, bleeding disorder and patient on anticoagulant medications were excluded from the study. The detailed history taking, clinical examination (General and ENT examination) and coagulation profile (BT, CT, PT, APTT) and complete blood count (including platelets count) was done in all the patients who were selected for this study. Data were analysed by simple manual analysis using frequency and percentage. Treatment methods used for controlling epistaxis were cauterization (chemical or bipolar electrocautery), anterior nasal packing and posterior nasal packing.

RESULTS

There were total of 72 patients with age ranging from 7 to 88 years. Out of 72 patients, 42 were male and 30 were female. Prothrombin time (PT) of the patients ranged between 11-16 seconds with the mean being 13.25 seconds. Similarly, the activated partial thromboplastin time (APTT) ranged between 28-32 seconds (mean 29.75seconds), bleeding time (BT) between 2-7 minutes (mean 4.9minutes) and clotting time (CT) ranged between 6-12 minutes (mean 9.15 minutes). Investigations for factor analysis was not done as all of these values were in within normal range. Out of 72 patients 48 patients (66.6%) were discharged home from emergency department and OPD after ENT consultation, while 24 patients (33.3%) were admitted to the ENT ward for further management. Out of these admitted patients 18 (75%) had bilateral anterior nasal packing, 4 patients (16.6%) required posterior nasal packing

along with anterior nasal packing and in 2 patients (8.3%) to control bleeding. However, patients without active bleeding at the time of their visit to ER/OPD in whom bleeder/raw area was not seen, were observed and discharged after 24 hours if there was no similar attack of epistaxis.

## DISCUSSION

Epistaxis is a common emergency condition in otorhinolaryngology. The cause of epistaxis can be local, systemic or idiopathic. Identification of the cause is important, as it reflects the management plan being followed by otorhinolaryngologist or hematologist<sup>5</sup> Being an emergency condition the patients with epistaxis often come to the ER where they are usually seen by medical officers or family physicians, most of whom order for routine coagulation screening for all these patients.

PT measures the extrinsic and APTT measures the intrinsic clotting pathway. Deficiency of clotting factor is less common so the specific factor assay of the clotting factors is usually not required but it can be performed when indicated. In our study all patients had normal coagulation studies. The chances of finding an abnormal coagulation profile in an otherwise normal individual with no co-morbidity are as low as 1%.<sup>6,7</sup> The role of routine coagulation studies in the management of patients with epistaxis is unclear. In our study there was not a single patient with epistaxis who had abnormal coagulation test result. Hence, our study supports previous studies that indiscriminate requests for coagulation studies only increase the costs incurred by the patient.<sup>8,9</sup> In a developing country like ours, it becomes more important that doctors only test patients in whom there is suspicion for bleeding diathesis, instead of requesting routine coagulation profile in all the patients with epistaxis.

Management of patient with epistaxis at any age group is done by resuscitating the patient, establishing the site of bleed, stopping the bleeding and treatment of the underlying cause. Epistaxis can be minimal or troublesome and life threatening. Treatment ranges from simple nose pinching to ligation of vessels after failed posterior packing. In our study most of the patients were directly discharged from ER/OPD after chemical cauterization, unilateral anterior nasal packing or after a period of observation in ER. Only few patients required admission for

further treatment in the form of bilateral anterior nasal packing, posterior nasal packing or electro-cauterization (bipolar). None of our patient required ligation of vessels.

## CONCLUSION

From our study we found that requesting for routine coagulation screening in all the patients presenting with epistaxis in ER/OPD has no role which only adds financial burden to the patient. A larger sample size scientific study should be carried out to justify the role of routine coagulation profile in patients with epistaxis. It is recommended from our study that coagulation screening should be carried out only if firm indications are found in the history and clinical examination of patients with epistaxis.

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