

Epistaxis in Visceral Leishmaniasis: A hospital based study in Eastern Nepal

Sigdel B,^{1*} Bhandary S,² Karki P,³ Ghimire A⁴

¹Department of Otorhinolaryngology and Head and Neck Surgery, Gandaki Medical college, Pokhara, Nepal, ²Department of otorhinolaryngology and Head and Neck Surgery, BP.Koirala Institute of Health ,Dharan,Nepal, ³Department of Internal Medicine, BP.Koirala Institute of Health ,Dharan,Nepal, ⁴Department of otorhinolaryngology and Head and Neck Surgery, Chitwan Medical college, Bharatpur,Nepal

*Correspondence to: Dr. Brihaspati Sigdel, Department of Otorhinolaryngology and Head and Neck Surgery, Gandaki Medical College, Pokhara, Nepal, email: brihassig@yahoo.com, Tel. No.: (+977)-61432290

ABSTRACT

INTRODUCTION: Epistaxis is a common clinical manifestation in endemic areas of Visceral Leishmaniasis (VL). This study aims to see the prevalence of epistaxis in VL in Eastern Nepal.

MATERIALS AND METHODS: This study was a prospective cross sectional hospital based study. Diagnosis was made by Rk-39 from peripheral smear & *Leishmania donovani* (LD) bodies from bone marrow. Before starting anti-kalaazar treatment, nasal examination findings were noted.

RESULTS: Nineteen out of 80 diagnosed case of VL patients had epistaxis (23.8%) with age group between 7-66 years. One patient had developed severe epistaxis and hemotoma and died.

CONCLUSION: Epistaxis is a common finding in endemic area of VL, however this needs to be confirm with larger cohorts.

KEY WORDS: Epistaxis, Visceral Leishmaniasis, Eastern Nepal

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Epistaxis in Visceral Leishmaniasis

Epistaxis, defined as bleeding from the nose is one of the most common emergencies of ENT surgery and can be managed conservatively in most cases.^{1,2} Leishmaniasis is a infection caused by the parasites of the genus *Leishmania*. It is not a single disease but a 'variety of syndromes' that are complex and cosmopolitan.³ Clinically leishmaniasis is divided into Visceral (kala-azar), cutaneous, mucosal, mucocutaneous and Post kala-azar dermal leishmaniasis (PKDL).⁴ Visceral Leishmaniasis (VL) has been reported from >60 countries.⁴ An estimated 500,000 persons are affected by this disease every year worldwide. The vast majority of these cases (90%) occur in poor rural area of India, Bangladesh, Sudan, Brazil and Nepal.^{5,6} *Leishmania donovani* is responsible for Visceral Leishmaniasis in Eastern India, Bangladesh, Nepal and vast areas of East Africa.^{4,7}

Prevalence of epistaxis was found up to 51% in Sudan and the Mediterranean littoral area which is endemic area of VL.³ Prevalence of epistaxis is not known in our area. This study was done to find out prevalence and the pattern of epistaxis among the VL patients at the hospital setting at Eastern Nepal.

The hospital based prospective cross sectional study was conducted at the Department of Otorhinolaryngology and Head & Neck Surgery and Department of Internal Medicine in B. P. Koirala Institute of Health Sciences Dharan, Nepal over period of one year from January 2007 to January 2008. All diagnosed cases of VL (n=80) that presented with epistaxis were enrolled and prospectively followed for epistaxis. Diagnosed patients on treatment, any co-morbidities presenting with epistaxis and patients not willing to participate in the study were excluded. The cases were diagnosed based on clinical profile and the presence of Rk-39 antigen from peripheral smear & LD bodies from bone marrow or tissue biopsy. Before starting anti-kalaazar treatment, history and nasal examination finding were noted. The other appropriate diagnostic test was done as necessary. Result was expressed on number and percentages.

Eighty diagnosed cases of Visceral Leishmaniasis included in this study. Nasal bleeding was found in 19 cases (23.8%). Age ranging from 7-66 years with mean age was 31.9±12.2 years. Male to female ratio was 2.17:1. Unilateral bleeding was seen in 11 (57.9%) cases, whereas bilateral bleeding was seen in 8 (42.1%) of cases. Anterior type bleeding found in Fourteen (74%) cases and posterior type in 5 (26%) (Table).

Table. Gender distribution, site and types of epistaxis in Visceral Leishmaniasis

Epistaxis (n=19)	n (%)
Gender	
Male	13 (68.4)
Female	6 (31.6)
Site of Epistaxis	
Unilateral	11(57.9)
Bilateral	8 (42.1)
Types	
Anterior	14 (73.7)
Posterior	5 (26.3)

Visceral Leishmaniasis is endemic in eastern terai of Nepal.⁸ In our study majority of the participants were male (65%). Male predominant may be due to male dominance society of Nepal. In such a gender biased society it is not surprising that greater health care is given to male child and male tend to attend health care facility earlier than female. Epistaxis is one of the common ENT emergencies. Prevalence of epistaxis in VL was 23.8% in our study but it was found to be 51% in Sudan and the Mediterranean littoral area³ and 47-88% in Zijlstra et al study.^{3,9} Difference may be due to differences in the sampling criteria and geographical variations. Bilateral bleeding (57.9%) was slightly greater than unilateral bleeding (42.1%). Most of bleeding was anterior type (73.7%). The presence of parasites in the nasal mucosa may play a role.⁹ Most of the patients had mucosal bleeding.

Anterior epistaxis refers to bleeding point seen on anterior Rhinoscopy. Posterior bleeding refers to active bleeding refractory to adequate anterior packing or when no bleeding point is identified on anterior Rhinoscopy.¹⁰ Anterior bleeding was more common than posterior bleeding (73.7 vs. 26.3). Bleeding from the anterior nares is one of the least understood symptoms of VL. The bleeding may be severe and life threatening. The presence of parasites in the nasal mucosa may play a role. Though bleeding usually responds well to symptomatic therapy (nasal tamponade using gauze with 1% lignocaine) it often recurs.⁹

The pathogenesis of epistaxis occurring in early phase of disease is not understood; but occurring late in the disease is probably due to a combination of deficient clotting factor and thrombocytopenia.³ In our study, a 23 years old male had presented with neck hematoma with nasal bleeding. Incision and

drainage was done for neck hematoma and posterior nasal packing was done for nasal bleeding. blood transfusion done. But patient was died due to excessive bleeding nose and neck.

Epistaxis was a common finding in cases of Visceral Leishmaniasis. Bilateral anterior diffuse bleeding was commonly encountered. Further community based studies are required to determine the exact prevalence of epistaxis.

CONFLICT OF INTEREST: None to declare

FINANCIAL INTEREST: None to declare

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