

LEECH IN THE HYPOPHARYNX: AN UNUSUAL CAUSE OF BLEEDING FROM THROAT

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This paper presents as a case of a 22 year-old young man who presented with a 4-day history of bleeding from throat. Indirect laryngoscopy revealed a blackish living foreign body in the right laryngo-pharynx. Pharyngo-laryngoscopy under general anaesthesia showed a leech, which was removed by forceps. We conclude that a high index of suspicion of leech infestation is required when faced with bleeding from throat.

Key words: Leech, Foreign body, Hypopharynx.

INTRODUCTION

Leech is a rare foreign body in the upper aerodigestive tract. Leech endoparasitism is extremely rare in urban areas but is frequent in endemic rural areas¹. Infestation occurs by drinking infested water from quiet streams, pools and springs. Leech infestation may cause serious complications like lethal dyspnoea, haemoptysis or haematemesia. A leech has been found in the nose, post-nasal space and oropharynx, but rarely in the hypopharynx or larynx. A few cases of leech in the hypopharynx or larynx have been reported in the literature during the past 10 years². This case is reported with the aim of including leech infestation as one of the causes of unexplained bleeding from throat.

CASE REPORT

A 22-year-old man was admitted to the Combined Military Hospital, Peshawar on 8th October 2003 with the history of blood stained saliva of 4 days duration. There was no history of trauma, foreign body ingestion, throat pain, fever, dysphagia and drug intake. He denied any malena, haematuria, epistaxis or ecchymotic spots on the body. He had no such complaints in the past. He has been serving near Pak-Afghan border and using spring water for drinking and household purposes till 6th October 2003.

Examination revealed normal oral cavity, oro and nasopharynx. His nasal airways were patent without any evidence of epistaxis. Indirect laryngoscopy (IDL) revealed blood stained secretions in

the right piriform fossa. There was no mass in the hypopharynx or larynx and both vocal cords were equally mobile. Plain radiograph of the neck did not reveal any increase in the prevertebral soft tissues or radio-opaque foreign body. His haemoglobin was 13.7 g/dL, total leukocyte count $10.9 \times 10^9/L$ with neutrophils 59%, lymphocytes 38% and erythrocyte sedimentation rate was 18mm at the end of first hour. Bleeding time, prothrombin time and activated partial thromboplastin time were normal while platelet count was $408 \times 10^9/L$. His stool was negative for occult blood. Indirect laryngoscopy was performed repeatedly. On 13th October he started feeling slight breathlessness and IDL revealed a blackish mass behind the epiglottis. On repeat IDL a leech was visible on the right aryepiglottic fold. The leech was removed with forceps under general anaesthesia and suction point was found at the apex of right piriform fossa. The leech was 5 cm in length, black in colour with no definite stripes or spots (Fig. 1). Post operatively he remained asymptomatic and was discharged from the hospital on 16th October 2003.

DISCUSSION

Leech is a worm, belonging to the phylum annelida, class Hirudinea. It has a sucker at each end of the body, one is usually bigger than the other and the mouth is in the front sucker. It feeds on the blood and tissue of other animals. It has a somewhat-flat body, with 34 segments.

Leech has been found in the nose, nasopharynx and oral cavity. The most common mode of



Fig. 1: Photograph of the Leech removed from the hypopharynx.

presentation is nasal infestation causing intermittent epistaxis and nasal obstruction³.

Leech endoparasitism, although rare, may cause serious, even lethal complications⁴. Lethal dyspnoea, haemoptysis or haematemesis can be the revealing symptoms. Mohammad et al. reported a case of a 6-year-old child who presented suffocating at the emergency room after having been diagnosed and treated for asthma over 1-month period⁵. The child had drunk leechinfested water in a rural area. Surgical removal of the leech resulted in resolution of the symptoms. Other four patients who inhaled leeches and developed severe attacks of inspiratory stridor, difficulty in breathing and spitting of blood were presented by Kaygusuz⁶. All were diagnosed by indirect laryngoscopy. The leeches were removed with forceps. Solomon et al described a case of acute laryngo-tracheal obstruction in a 12-year-old boy⁷. After removing a live leech from the larynx under general anaesthesia, the author emphasized that a high index of suspicion of leech infestation must be entertained when faced with acute respiratory distress associated with haemoptysis in children and should be investigated surgically as with all foreign bodies. Labadi and Jamal reported two patients with leech inhalation. One of them presented with severe attacks of inspiratory stridor, cyanosis and cough of five days duration and the other with two weeks history of difficulty in breathing, dysphagia, and spitting of blood². In both cases live leeches were seen on indirect laryngoscopy and removed with forceps under general anaesthesia. El-Awad and Patil presented a case of haematemesis and malena due to leech in the posterior pharyngeal wall and requiring blood

transfusion⁸. Gupta et al. reported a patient who presented with complaints of hoarseness of voice, pain and foreign body sensation in the throat of one month duration⁹. The laryngeal examination showed a leech in the larynx attached to the inferior surface of the left vocal cord and the tail moving over its superior surface.

Leeches bite warm surfaces and ingest blood meals. The neurons of the nervous system of the leech have high concentration of serotonin. Some of these neurons directly activate the effectors responsible for salivary secretion, bite like movements and pharyngeal peristalsis. Serotonin causes differential modulation of central neuronal networks, peripheral glands and muscles and thus plays an important role in the initiation and expression of leech feeding behavior. The saliva of the leech contains hirudin a powerful anti coagulant and histamine-like vasodilator that promote local bleeding¹⁰. This explains the haemorrhage like epistaxis, haematemesis or haemoptysis. The saliva also contains a local anaesthetic and hyaluronidase.

A leech in the nose or nasopharynx causes epistaxis, nasal obstruction, and sensation of a moving foreign body in the nose. Nasal leech can be easily diagnosed while that lying in the nasopharynx may require examination under general anaesthesia for its diagnosis and removal. A patient having a leech in the oral cavity presents with spitting of blood and a feeling of a foreign body. A leech in the hypopharynx causes bleeding, leading to spitting of blood or haematemesis and that lying in the larynx gives rise to airway obstruction and change of voice. Diagnosis may be made by indirect laryngoscopy or fiberoptic examination. Soft

tissue radiograph of the neck may reveal a foreign body but is not specific for the leech. Examination under anaesthesia (direct laryngoscopy and pharyngoscopy) is essential and performed as an emergency for diagnosis and removal of the leech.

In **conclusion**, possibility of leech endoparasitism should be considered as a cause of unexplained bleeding from the throat in areas where aquatic leeches are commonly found, particularly when there is a history of recent contact with lakes, streams or springs.

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