

An Unusual Cause of Epistaxis and Stridor: Nasal and Laryngeal Live Leech: Case Report

Epistaksis ve Stridorun Nadir Bir Nedeni: Nazal ve Laringeal Canlı Sülük

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ABSTRACT

Foreign bodies of the upper aerodigestive tract consist of an important part of the otorhinolaryngology emergencies. Clinical presentation of the foreign bodies vary according to the shape and location of the foreign body. Leeches are belong to the class of rounded worms and is an hermaphrodite parasite known as "Hirudo Medicinalis". Leeches are carnivore organisms attaches to the vertebrated animals to suck blood from them. They mostly live in the non-sanitised water at rural ares. Infestation occurs by drinking or swimming in such water supplies. They suck so much blood by secreting an anticoagulant mediator called hirudin in their saliva. They may be seen in nasal cavity, nasopharynx, oropharynx, larynx, esophagus and bronches. 65 years old male patient admitted with epistaxis and respiratory distress. Routine otorhinolaryngologic examination revealed two live leeches at left nasal cavity and at left false vocal fold hanging in to the rima glottis. Complaints of the patient disappeared as soon as the leeches removed from nasal cavity and larynx. Upper aerodigestive tract leech infestation should kept in mind in the patients who suffer from upper digestive tract foreign body after drinking or swimming in the water supplies at the rural areas.

Keywords

Leech, larynx, nasal cavity

ÖZET

Üst solunum yolunda görülen yabancı cisimler kulak burun boğaz pratiğinin önemli bir kısmını oluşturur. Klinik, yabancı cismin şekline ve yerleşim yerine göre değişkenlik gösterebilir. Sülükler halkalı solucanlar şubesine ait "Hirudo Medicinalis" adı ile bilinen hermafrodit bir parazittir. Vertebralı canlılara tutunarak ve kan emerek beslenen etçil canlılardır. Kırsal kesimde; doğal ve açıkta bulunan, uygun dezenfeksiyonu yapılmamış su kaynaklarında yaşarlar. Konaklara; suların içilmesi, yıkanılması ve kontamine su içinde yüzülmesi ile bulaşır. Salgıladıkları antikoagülan etkili bir madde (hirudin) sayesinde fazla miktarda kanamaya neden olurlar. Nazal kaviteye, nazofarenkse, orofarenkse, larinkse, özefagusa ve bronşlara tutunabilirler. 65 yaşında erkek hasta burun kanaması ve solunum sıkıntısı ile başvurdu. Hastanın yapılan rutin muayenesinde sol nazal kavitede ve sol yalancı kord üzerinde canlı sülük görüldü. Yabancı cisimlerin genel anestezi altında çıkarılmasından sonra hastanın şikayetleri dramatik olarak düzeldi. Dezenfeksiyonu yapılmamış ve kontrol altında bulunmayan su kaynaklarından su içilmesi, yıkanılması ve yüzülmesi sonrasında üst solunum yolunda yabancı cisim şikayeti ile başvuran hastalarda sülük enfestasyonu akılda bulundurulmalıdır.

Anahtar Sözcükler

Sülük, larinks, nazal kavite

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INTRODUCTION

Foreign bodies located to upper aerodigestive tractus consist of an important part of the otorhinolaryngologic emergencies.¹ Clinical course varies according to the shape and location of the foreign body. Leeches belong to the rounded worm class, known as “*hirudo medicinalis*” and are carnivore parasites. They attach to the vertebrate hosts and feed themselves by sucking blood. Length of the leeches varies from 5 mm to 45 mm.² Leech secretes an anticoagulant agent called “*hirudin*” which helps to suck more amount of blood from the host by inhibiting antitrombin-3 and factor IX a. Leeches are used in reimplantation and flap surgery to increase blood supply of the implanted tissues. In spite of these useful features, during an infestation of the larynx death may be seen due to asphyxia or anemia so urgent treatment should be done in the course of this infestation. Epistaxis, oral hemoragia, feel of foreign body, dysphonia and respiratory distress may be seen in leech infestation who has a history of drinking or swimming in undisinfected water.³

In this paper, a 65-year-old male patient who had epistaxis, dysphonia and respiratory distress after drinking spring water and diagnosed as nasal and laryngeal leech infestation was presented.

CASE REPORT

A 65-year-old male patient is presented to our clinic for left epistaxis, dysphonia and respiratory distress. His complaints have started after drinking waited spring water. Routine ENT examination revealed left nasal hemoragia, live foreign body and laryngeal live foreign body. Patient is taken to the operation room urgently for laryngeal and nasal leech infestation. Leeches are removed from larynx and nasal cavity by appropriate surgical instrumentation. Panendoscopic examination of the upper aerodigestive tractus was normal against the probability of another foreign body. Patient is discharged 1 day later no complication has been seen (Figures 1-4).

DISCUSSION

Leech infestation is reported frequently at nasal cavity, nasopharynx, oropharynx, hypopharynx, external auditory meatus, conjunctiva and gastrointestinal tractus but rarely in larynx and simultaneously in both



Figure 1. Live leech stuck out from larynx.

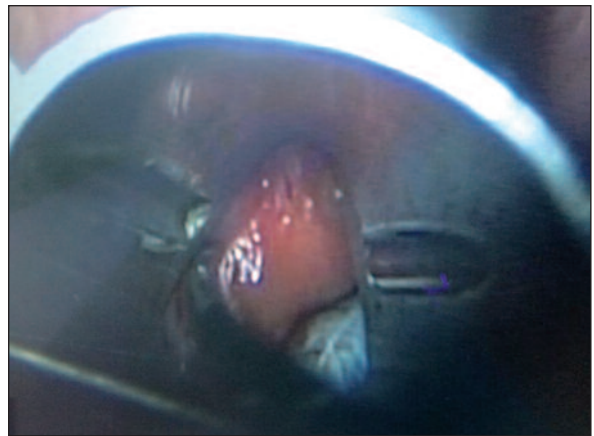


Figure 2. Supraglottic region leech splitted off.

anatomic site.^{3,4} First reported cases are to date back to 10th century.^{1,5} Leeches secrete an anticoagulant agent called “*hirudin*” so they can suck more amount of blood according to an ordinary wound. Leeches attach to the host after drinking or swimming in non-sanitized water supplies. They can split from the tissue after sucking enough amount of blood. In our case leech infestation occurred after drinking spring water. Clinical course differs according to the site where it attaches. Epistaxis and nasal obstruction may be seen in the nasal cavity leech infestation. Oropharyngeal and hypopharyngeal leech infestation lead to feel of foreign body and hemoragia. Dysphonia and respiratory distress may be seen in the laryngeal leech infestation. In our case epistaxis and respiratory distress were seen due to nasal and laryngeal attachment. Anemia may be seen if the infestation is long standing. In this case the infestation was no longer to cause anemia.

Leech infestation should be kept in mind who has a suspicion for upper aerodigestive tract foreign body and upper aerodigestive tract originated hemoragia after



Figure 3. Nasal live leech.



Figure 4. Supraglottic region leech splitted off.

drinking or swimming in uninfected water supplies. Such patients should be evaluated with endoscopic examination for multiple leeches. This case is unique for multiple leeches from other reported cases.

Dramatic recovery may be seen as soon as the leeches are removed from the host. Laryngeal leech infestation is an urgent clinical condition due to increasing of the leech size and leading to stridor. Patient should be in trendelenburg position avoiding to aspirate the leech to the lower airway. Tracheotomy and bronchoscopy may be need for the patient.

During the anesthetic induction neuromuscular blocking agents may block the neuromuscular junction

in the patient and also in leech body and lead to split of the leech. So these kind of medications shouldn't administered during the operation. In this case we removed the leech from larynx without intubation not to remove the leech frantically and to avoid bleeding. Nasal leech is removed just after the intubation following laryngeal leech removal.

Because of the fragile and slippery structure, during the removal of the leeches care should be taken not to tear off the leech which may lead to uncontrollable hemoarrhage.^{2,6} We confirmed that all parts of the leech is removed and no hemorrhage is present with direct laryngoscopy.

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