Management of Nasal Leech Infestation in a Rural Setting

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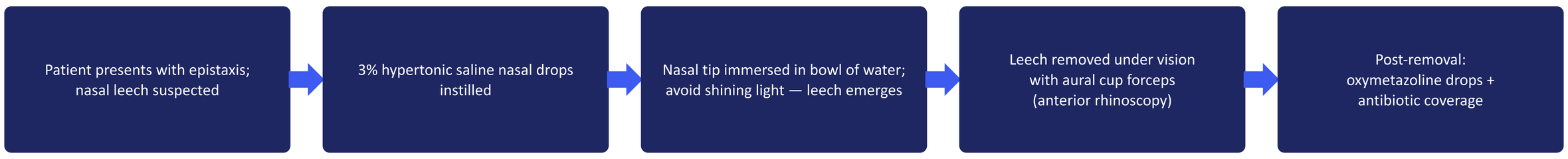
INTRODUCTION

The option for endoscopic removal of a nasal leech is limited in remote locations. Hence, a minimal intervention technique,[1] by which the primary care physician can attempt removal, was undertaken in our rural hospital in South India.

METHODS

This is a retrospective case series (September 2022 – June 2023) of six patients who presented with epistaxis and were found to have nasal leech infestation.

Five to six drops of 3% hypertonic nasal saline drops were instilled into the affected nostril, and the tip of the patient's nose was immersed in a bowl of water by making them lean forward. Repeated illumination of the nasal cavity was avoided. When the leech eventually emerged, aural cup forceps were used to gently remove it under vision on anterior rhinoscopy (Fig. 1 and Fig. 2). Post-removal, 3 drops of Oxymetazoline (0.05%) nasal drops and prophylactic antibiotics were given. A check endoscopy was done later, which revealed no remnants or other leeches in hidden areas of the nose.



RESULTS

Subjects ranged from 9 to 60 years of age (5 of 6 patients were male, 83%) and presented with unilateral nasal bleeding, intermittent nasal blockage, or an itchy/foreign-body sensation for a duration of 1–21 days.

Table 1: Patient details of the case series

Sl No	Age/Sex	Complaint	Duration	Anterior Rhinoscopy
1	9/M	Bleeding from right nostril, low grade fever	3 days	Leech in right nasal vestibule
2	60/F	Bleeding and pain from right nostril	2 weeks	Leech in right nostril on inferior turbinate
3	38/M	Something moving/itching sensation — right nostril while washing face	1 day	Leech in right nostril between middle and inferior turbinate
4	23/M	Bleeding from left nostril	5 days	Leech in left nasal vestibule
5	20/M	Bleeding from right nostril	1 week	Leech in right nostril on inferior turbinate
6	27/M	Intermittent left nasal block with bleeding	3 weeks	Leech in left nostril on septum



Fig. 1: Leech that was removed



Fig. 2: Leech placed in the bowl of water used during removal

- All patients had a history of contact with spring water, either by drinking it or using it to wash their faces, prior to symptom onset.
- No leech remnants were noted on the endoscopy done later, which only showed a few hyperemic spots.

DISCUSSION

This study demonstrates a rare cause of epistaxis, especially in Mediterranean countries and in tropical areas of Asia and Africa. In regions where they are endemic, the presence of a leech in the nose should be considered. Species that commonly infest humans include *Hirudinea granulosa* and *Hirudinea viridis*.[2]

Keeping the tip of the patient's nose in water causes a tactile stimulation from splashing that attracts leeches toward it.[3] Leeches generally move away from white light (negative phototaxis),[4] so avoiding repeated light exposure allows the leech to move toward the water.

Endoscopic removal under general anesthesia is advised when leeches are located in the larynx, epiglottis,[5] nasopharynx, or posterior nasal cavity not visible on anterior rhinoscopy, and in young children where compliance is difficult. Where ENT and anesthesia services are limited, this minimal-intervention technique[1] was effective using only basic outpatient resources.

Table 2: Reported methods of nasal leech removal

Sl No	Method	Details	Mechanism
1	Removal under vision with forceps/ negative suction	Artery, ethmoid, dentate, aural cup forceps	Detached by gentle traction under direct vision/endoscopic guidance
2	Topical agents	30% cocaine, 1:10,000 adrenaline, dimethyl phthalate, saline, vinegar, turpentine, alcohol, ephedrine	Irritates the leech, causing detachment and weakening sucker adhesion
3	Paralyzing the leech	Lidocaine injected into leech body; 2% pontocaine spray	Immobilizes the leech, facilitating removal
4	Wait & watch	Nasal tip 1cm away from the water; avoid shining excess light into the nose	Leech drawn out by the presence of water

CONCLUSIONS

Our minimal intervention technique of masterly inactivity for nasal leech removal should be considered by primary care physicians in a resource-limited setting, in patients in whom the leech is seen on anterior rhinoscopy. Referral for endoscopic removal should be considered when it is not visible.

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