

# Nasopharyngeal Pentastomiasis (Halzoun): Report of 3 Cases

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## Abstract

A three-member family from Tehran referred with variety of nasopharyngeal symptoms including sneezing, coughing and nasal discharge following consumption of barbecued liver (Kabab). Thirteen worm-like nymphs of *Linguatula serrata* were separated from larynx, nose and gum of these patients. The adult parasites live in the nose and paranasal sinuses of dogs and other carnivores. Although this infection is rare, in population who have the habit of consuming undercooked internal organs of herbivorous animals the physicians should consider its probability.

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**Keywords** • *Linguatula serrata* • pentostomiasis • halzoun

## Introduction

**L***inguatula serrata* or tongue worm which causes nasopharyngeal pentostomiasis is a worm-like organism belonging to the phylum of *Pentostomida* and family of *Lynguatulidae*. The adult parasite lives in the nose and paranasal sinuses of dogs, cats, foxes and other carnivores as definitive hosts and its nymphs live in the liver, lungs and lymph nodes of herbivores.<sup>2</sup> Human cases occur accidentally by eating raw or undercooked internal organs of sheep, goat and other herbivorous animals.<sup>3</sup>

## Case Report

A family including a 27-year-old man and two women aged 23 and 43 years referred with nasopharyngeal symptoms of one week duration. They stated that their clinical symptoms started two hours after eating barbecued sheep liver. Described symptoms were discomfort and a prickling sensation deep in throat which extended to the ears. The symptoms were soon added by coughing, sneezing, yellow nasal discharge, dyspnea, dysphagia and frontal headache. Routine clinical examinations showed edematous congestion of gums, tonsils and mucosa of the nose and larynx associated with nasal and lachrymal discharge. With the help of a forceps, 13 white worm-like organisms were separated from larynx, nose and gums of the patients. On microscopical study, nymphs of *Linguatula serrata* were identified. The nymphs measuring 5–0 mm in size were fully covered by rows of spines (Fig 1). The anterior end of the parasite harbored the mouth expanded for attachment to mucosal tissues by a mouth and 4 large hooks (Fig 2).

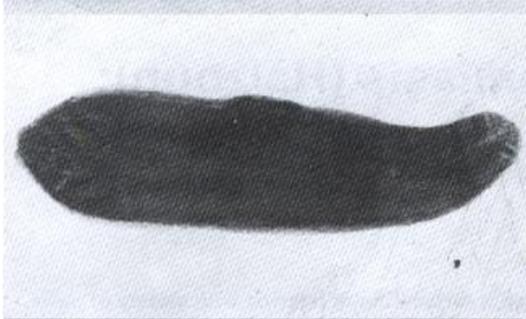
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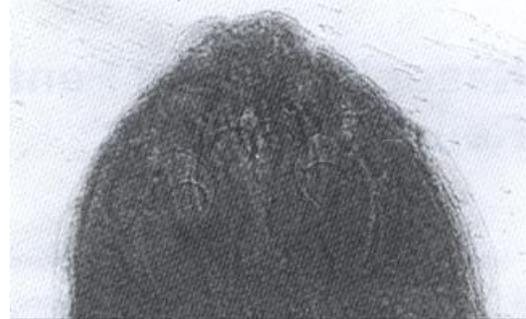
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**Fig 1:** Nymph of *Lynguatuula serrata* with expanded anterior end (x40).



**Fig 2:** Nymph of *Lynguatuula serrata*, 4 well-developed hooks are observed (x80).

### Discussion

Halzoun is a rare human infection by nymphal *Lynguatuula serrata*. According to Schacher and co-workers.<sup>3</sup> Halzoun has been a clinically well recognized but etiologically an obscure disease in Levant since its original description by Khouri in 1905. In the Sudan, it is known as Marrara syndrome. In Lebanon the disease is linked in the popular mind with eating raw or undercooked sheep and goat and particularly camel.<sup>4</sup> Usually within a few minutes to half an hour or more after eating, the clinical picture will which are mainly centered around nasopharyngeal symptoms.<sup>2</sup> At various times, this condition was suspected to be caused by trematodes, *Fasciola hepatica*, *Clonostomum complanatum* and *Dicrocoelium dendriticum* and also by leeches. However, the recovery of pentostomides from the nasal passages and throats of patients in India, Turkey, Greece, Morocco and Lebanon indicated that this species was

the main causative agent of this condition.<sup>2,4</sup> Cases were also reported by Arbabi and coworkers from Iran with a similar history of infection.<sup>1</sup>

### References

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