

Human linguatula serrata infection: a systematic review of reported cases

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Abstract

Human linguatulosi is a considerable medical problem in endemic regions. The infection is caused by a cosmopolitan food-borne zoonotic parasite *Linguatula serrata* (*L. serrata*) belonging to class pentastomida. Adult parasites reside in upper respiratory system, nasal airways and sinuses of carnivorous animals as their final hosts. Herbivorous and other ruminants as intermediate hosts reserve immature form of parasite in mesenteric lymph nodes, liver, lungs and spleen. Human get infection with both adult and nymph stages of parasite. Halzoun syndrome (Marrara syndrome) is the most common form of human nasopharyngeal linguatulosi which is transmitted through ingestion of *L. serrata* nymphs (adult stage) found in intermediate host's organs and resulting in nasopharyngeal linguatulosi with signs of pharyngitis, salivation, dysphagia, and cough. This review includes previous studies on *L. serrata* conducted in Iran and other countries from 1940 to 2019. A systematic search is undertaken on five English and five Persian databases for English or Persian publications describing human linguatulosi cases in the world. Totally, 30 papers reporting 62 human linguatulosi cases from various regions of the world are included in this review. All included papers were from the English databases. The age of patients ranged from 8 to 79 years, and the mean age was 25.8 years. Of all the patients, 41 (66.1%) were female and 21 (33.9%) were male. The highest number of cases ($n = 25$) was reported from Sudan. The nasopharynx was the most commonly reported anatomical location of human linguatulosi cases. As a result, we think that physicians should consider *L. serrata* infestation in patients attending to the health foundations with complaints such as pharyngitis, accompanied by pharyngeal pain, coughing, sneezing and vomiting.

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