First case of human gongylonemosis in France

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Abstract – Gongylonema spp. are cosmopolitan spirurid nematodes that are common parasites of wild and domesticated mammals and birds. Gongylonema pulchrum Molin, 1857 is most common in ruminants, where it invades mucosa and submucosa of the mouth, tongue, oesophagus and forestomachs. It extremely rarely occurs in man, and fewer than 60 cases have been reported worldwide. We report a case from the Alsace region, which appears to be the first case of human gongylonemosis described in France.

Key words: Gongylonema, human infection, zoonosis, France, case report.

Résumé – Premier cas de gongylone´mose humaine en France. Les nématodes du genre Gongylonema sont des spirurides cosmopolites parasites fréquents dans de nombreux mammifères et oiseaux sauvages ou domestiques. Gongylonema pulchrum Molin, 1857 est l’espèce la plus souvent rapportée chez les ruminants, dans la muqueuse et la sous-muqueuse de leur bouche, langue, esophage et rumen. Il n’est que très exceptionnellement retrouvé chez l’homme. Moins de 60 cas ont été décrits à travers le monde. Nous rapportons dans cet article le premier cas français, découvert en Alsace.

Case report

During the summer of 2012, a healthy 48-year-old man felt the presence of a moving, worm-like organism in his mouth. Initially, the patient would occasionally feel, but not see, this mass at different sites: cheek, palate, gums and internal surface of the lower lip. The sensation would subside after several hours without leaving any visible lesions and without being accompanied by any associated localized or generalized symptoms.

The patient had no medical history. He is a resident of Alsace, France, and had not travelled abroad. He works as a maintenance service agent in a harbour on the river Rhine. He reported not to have changed his lifestyle, especially not his diet, in the recent past. He also had no knowledge of having accidentally ingested an intermediate insect host. He consulted a doctor and all results of the clinical examination fell within the normal range. Haematology investigation revealed no abnormalities, particularly no elevated eosinophil count, and no microfilariae were seen using stained blood films; the filariasis serology was negative. No medical treatment was initiated.

After 3 weeks of migration, the thread-like worm installed itself on the inner surface of the lower lip (Figure 1), allowing the patient to extract it by tongue pressure firstly, then using his fingers. He placed the parasite in alcohol and submitted it to a medical laboratory. The biologist in charge sent the specimen to the Laboratory of Parasitology and Medical Mycology of the Strasbourg University Hospital for identification. No recurrence, lesions, bleeding or other symptoms have since been experienced by the patient.

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mammals or poultry, has been discussed by Euzeby [5]. Definitive hosts could become infected when ingesting their viscera. Alicata [1] suggested that larvae excyst in the stomach of the insect or parts of it containing third-stage larvae. These larvae may emerge from intermediate hosts that fall into water within a few days after removal of the worm without any further therapy. Some patients have been treated with albendazole [4, 13]. Different studies have investigated the benefit of using this anthelmintic: it does not favour the elimination of the parasite, but can eradicate other possibly present nematodes [15]. In the present case, the patient extracted the worm himself and did not receive any anthelmintic treatment.

Gongylonema pulchrum is a common parasite of animals which rarely infects humans. Despite its worldwide distribution, it is an unfamiliar parasite, little-known by clinicians and medical biologists. The typical symptoms described by the patients, such as the sensation of a migrating thread-like form and the localization in the oral cavity, must prompt a careful clinical examination of the mouth. Any worm-like objects should be removed and studied under a microscope, where the presence of the typical verruciform cuticular bosses would easily confirm the final diagnosis of gongylonemosis.
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References
