

THE FINDING OF *GONGYLONEMA PULCHRUM* MOLIN, 1857 (NEMATODA) IN MAN

By courtesy of Professor Dr D. Povolný we received 4 specimens of parasitic worms which had been sent to him by Mr. C. H. from Vienna. In April 1967, Mr. C.H. noticed a rough area on the outer side of his lower jaw directly under the canines. This was lightly inflamed and sensitive particularly to hot food. In the mirror Mr. C.H. saw a convoluted formation of whitish colour which was clearly moving in the surface of the mucosa. When extracted with an entomological pin Mr. C.H. identified it as a parasitic worm. The last specimen was extracted from under the tongue at the end of July 1967. All worms (1 male and 3 females) were placed in alcohol and sent to Professor Povolný.

The parasites were identified as the species *Gongylonema pulchrum* Molin, 1857 (Nematoda: Spiruroidea). The male measured 19 mm, maximum width 0.27 mm, the females 24, 27 and 29 mm respectively, their maximum width was 0.32 mm. Typical of this species is the unequal length of the male's spicules. The left spicule measured 11.5 mm, the right 0.120 mm, the gubernaculum 0.094 mm. We saw clearly wide cuticular alae on the posterior end of the male's body and 6 preanal and 5 postanal pairs of pedunculate papillae. The cloaca was 0.24 mm from the posterior end. All these features are most characteristic of the species *G. pulchrum*.

G. pulchrum is a frequent parasite of ruminants (cattle, sheep, red deer, buffalo). It is also found in the pig, bear, horse, hare, rabbit and monkey. Many authors have found this nematode in man. FAUST (Human Helminthology, pp. 1-744, Lea and Febiger, Philadelphia, 1949) reported 17 cases (2 from Italy, one from Germany, 3 from Bulgaria, one from the U.S.S.R., one from Ceylon and 9 from the U.S.A.). This nematode is most frequently attached to the wall of the oesophagus and to the cardiac area of the stomach. In man these worms are mostly found in the mucosa of the oral cavity.

The morphology of these worms, especially their length, changes in the various hosts. GROSCHAF (Čs. parasit. 9, pp. 231-238, 1962) found that they are considerably shorter in bovine animals (length of males 39 mm, length of females 78.5 mm) than in sheep (male 63.6 mm, female 121 mm). All our specimens were relatively short, measuring less than 30 mm at full maturity. This indicates that an unusual host influences not only the atypical localization but also the difference in the size of the parasites.

A number of authors studied the development of *G. pulchrum* (e.g. BAYLIS II. A., SHEATHER A. I. and ANDREWS W. H. /J. Trop. Med. Hyg. 29: 194-196, 1926/, POPOVA E. G. /Tezisi dokladov konferencii VOG, Moskva, pp. 121-122, 1958/, RANSOM B. II. and HALL M. C. /J. Parasitol. 2: 80-86, 1915/). Intermediate hosts of this species are various insects such as *Blatella germanica*, beetles of the genus *Aphodius* (*A. granarius*, *A. circumcinctus*, *A. aestivalis*, *A. hydrochoeris*, *A. lugeus*, *A. luridus*, *A. nitidulus*, *A. rufus*, *A. subterraneus*, *A. vittatus*), and a number of coprophagous beetles (e.g. *Copris lunaris*, *Geotrupes stercorarius*, *Onthophagus fracticornis*, *O. furcatus*, *O. gibbulus*). The only possibility of infecting man seems to be that infected beetles are swallowed with the food. Mr. C. H. has spent previous to the infection a short time in Turkey (1965) and in 1966, his holiday in Kärnten. The widespread distribution of *G. pulchrum* throughout Europe indicates that an infection may occur in any area where cattle or sheep are reared on a large scale. The incidence of infected intermediate hosts may be expected to be higher in such areas.

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