Rev. Inst. Med. trop. São Paulo
32 (4): 285-288, julho-agosto, 1990

HUMAN PARASITISM BY Phagicola sp (TREMATODA, HETEROPHYIDAE) IN CANANÉIA, SÃO PAULO STATE, BRAZIL

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SUMMARY

We report one case of parasitism by **Phagicola** sp. (Trematoda, Heterophyidae) in a 31 years-old woman who, in 1987, travelled and stayed several months in the municipality of Cananéia (SP), where she ingested, in various occasions, raw mullet (**Mugil** sp.). The patient refered mild intestinal pain and laboratory examinations showed eggs of **Phagicola** sp. in the stools and a slight increase in eosinophil blood levels (8%). After treatment with praziquantel (75 mg/kg per day for three days) all the symptoms and signs disappeared. This is, certainly, the first record of human infection by **Phagicola** sp. in Brazil and, perhaps, in countries other than the U.S.A. where unclear references to a few human cases were reported in the South-eastern region.

KEY WORDS: Phagicola sp., **Phagicola longa**, Heterophyids; Human parasitism; Mullets; **Mugil** sp.

INTRODUCTION

Adult heterophyid flukes are frequent as intestinal parasites of birds and mammals which eat fishes[2, 3, 7, 12, 16, 19]. Humans become infected by eating parasitized raw or inadequately cooked fish. Even improperly salted or pickled fishes may transmit such worms to men[10].

More than 10 species of heterophyids have already been found in humans, but **Heterophyes heterophyes** and **Metagonimus yokogawai** are the most common[10, 20] and, up to now, the great majority of human reported cases have occurred in the Far East and in some parts of the Middle East[10]. Recently, one case of a woman who became infected with **H. heterophyes** was recorded in the U.S.A.. The epidemiological investigation carried out showed that the origin of this case was ingestion of a fresh-water raw fish meal ("sushi") that was flown in from the Orient, by a restaurant specialized in Japanese food[1]. A similar form of acquired infection by **Clonorchis sinensis** was reported by FAUST et al.[8] to explain the occurrence of this infection in Hawaians, where the snail intermediate hosts of **C. sinensis** are absent.

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CHIEFFI, P. P.; LEITE, O. H.; DIAS, R. M. D. S.; TORRES, D. M. A. V. & MANGINI, A. C. S. — Human parasitism by **Phagicola** sp. (Trematoda, Heterophyidae) in Cananéia, São Paulo State, Brazil. **Rev. Inst. Med. trop. S. Paulo, 32(4)**: 285-288, 1990.

The genus **Phagicola**, also belonging to the family Heterophyidae, has several species that are intestinal parasites of fish-eating birds and mammals in Europe, Asia, Africa and America[2, 4, 7, 11, 13, 14, 16, 19]. Their life-cycle is complex and includes a passage by two intermediate hosts, a fresh or brackishwater snail where cercariae are born, and mullet, a brackish or salt-water fish, belonging to the family Mugilidae, where the encystation of metacercariae occurs[15].

There are no more records of human cases of parasitism by **Phagicola** sp. with the exception of a vague and imprecise reference to possible occurrence of human infection by **P. longa** in the U.S.A., as consequence of consumption of cold-smoked, salted or raw mullets[15].

The present report refers to one case of human infection by **Phagicola**, probably **P. longa**, in a woman who travelled to Cananéia, in the Southern São Paulo, Brazil, where she worked for some months.

CASE REPORT

A 31 years-old female with an one-month history of colic abdominal pain, without other complaints, was seen as an outpatient by one of us (O.H.L.), in August 1987. According to the patient's informations, she was working in the municipality of Cananéia, in Southern São Paulo State, in early 1987, where, often, she had ate raw fish meals, mainly prepared with mullet.

On physical examination the patient was eutrophic, without fever and weigning 60 kg; abdominal examination revealed painfull palpation of the right lower quadrant, and hyperactive bowel movements.

Previously, the patient had a stool examination in a private clinical pathology laboratory resulting in the finding of trematode eggs identified as **Clonorchis sinensis**. However, when two other stool samples were seen at the Enteroparasitosis Section of the Adolfo Lutz Institute (São Paulo State, Brazil) the diagnostic finding was not confirmed, but another kind of trematode eggs resembling **Phagicola** eggs (probably **P. longa**), measuring 21.3 μm x 12.4 μm (Fig. 1) were found. Quantitative coprological examinations

Fig. 1 — **Phagicola** sp. egg (400 X) found in patient's stool.

performed by the Kato-Katz method's showed the elimination of 120 eggs of **Phagicola** per gram of stool. Blood tests showed only a light increase in eosinophil levels (448 -or 8%- eosinophils in 5,600 leukocytes).

The patient was treated with praziquantel, 75 mg/kg/per day for three days, without any side-effects. Stool examinations performed in the 15th, 30th, 45th and 60th days after treatment showed no eggs of **Phagicola**, and an eosinophil count within the normal range. Clinical evaluations made 60 days after praziquantel administration showed disappearance of the abdominal symptoms.

DISCUSSION

The acquisition of some eastern culture habits by western people may facilitate the spread of some kind of food-borne diseases[9]. As example of this situation, the habit of eating raw fish has increased in western countries, including Brazil, favouring the occurrence of fish-borne diseases. As consequence, recently, a few cases of helminthiasis transmitted by raw, cold-smoked or salted fishes were reported in the U.S.A.[1, 17, 21].

The finding, in human stools, of trematode eggs with size and morphological features as shown in Fig. 1, strongly suggests the diagnosis of human infection by **Phagicola** sp.. This hypothesis is strengthened as the patient ate, in several occasions while living in the municipality of Cananéia, a special oriental dish ("sashimi") prepared with raw mullet, known as the fish where **Phagicola longa** metacercariae are frequently found in Cananéia's region[5, 6].

P. longa and other species of the genus **Phagicola** have been reported, as bird and mammal parasites, in many places in the American continent, including Brazil[3, 4, 7, 11, 13, 14, 16, 18, 19], but this is, certainly, the first Brazilian record of a human infection by **Phagicola** sp.. No records of human parasitism by **Phagicola** sp. were found in other countries, with the exception of vague references to the possible occurrence of some cases in the South-eastern region of the U.S.A.[15], as consequence of raw mullet ingestion.

Known human infections by heterophyids are, usually well tolerated, except some cases of **Heterophyes heterophyes** human parasitism that can, eventually, develop invasion of other organs than the bowel[10, 20]. The case here reported is characterized by the occurrence of very mild intestinal symptoms and by a slight increase of eosinophil levels, both reaching normal features after praziquantel treatment.

RESUMO

Parasitismo humano por Phagicola **sp. no município de Cananéia, Estado de São Paulo, Brasil**

Relata-se o primeiro caso de parasitismo humano por **Phagicola** sp. registrado no Brasil em paciente do sexo feminino e de 31 anos de idade que viajara, no início de 1987, para Cananéia, no litoral sul do Estado de São Paulo, permanecendo alguns meses nesse município, por motivos profissionais. A paciente queixava-se de dores em cólica no abdomem; no exame parasitológico de fezes encontraram-se ovos de **Phagicola** sp. e discreto aumento da quantidade de eosinófilos (8%) no hemograma. A paciente admitiu a ingestão de pedaços crus da tainha (**Mugil** sp.), em diversas ocasiões, durante sua permanência em Cananéia. O tratamento com praziquantel (75 mg/kg/dia/3 dias) resultou em cura clínica e parasitológica. Não existem outros relatos de parasitismo humano por **Phagicola** sp. no Brasil. Em outros países, cuidadosa revisão da literatura não logrou encontrar referências de acometimento humano, salvo vaga citação acerca da possível ocorrência de alguns casos no sudeste dos Estados Unidos da América do Norte.

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Recebido para publicação em 24/11/1989.