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**Diagnosis of fascioliasis
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

Drafting organizations of this standard. Chinese Center for Disease Control and Prevention, Institute of Parasitic Disease Control, Anhui Institute of Parasitic Disease Control, China Shanghai Institute of Veterinary Medicine, Academy of Agricultural Sciences, Dali Prefecture Institute of Schistosomiasis Control, Yunnan Province, and Affiliated Hospital of Dali University.

1 Scope

This standard specifies the diagnostic basis, principles, diagnosis and differential diagnosis of Fascioliasis.

This standard applies to the diagnosis of Fascioliasis by medical institutions and disease prevention and control institutions at all levels across the country.

2 Terms and definitions

The following terms and definitions apply to this document.

Fasciola spp.

Fasciola hepatica (Fasciola hepatica) and giant fasciola Fasciola gigantica (see Appendix A).

Fascioliasis

Diseases caused by Fasciola parasites in the human body, including acute phase caused by the migration of Fasciola juveniles in the abdominal cavity and liver parenchyma Damage, and chronic-phase damage mainly caused by bile duct epithelial hyperplasia, bile duct and gallbladder inflammation caused by adult parasites in the bile duct.

Asymptomatic case

Those who have Fasciola parasitic in the body without obvious clinical symptoms and signs.

Fascioliasis endemic area There is an intermediate host of Fasciola (small soil snail and other freshwater snails of the family Vertebriidae), and local people and/or ruminants such as cattle and sheep are infected Fasciola area.

3.1 Epidemiological history

Have a history of living, working, traveling in endemic areas, and have a history of eating aquatic plants or drinking raw water (see Appendix B, B.1).

3.2.1 Acute phase

Fever, abdominal pain, fatigue, or accompanied by anorexia, vomiting, abdominal distension, diarrhea and other symptoms; liver enlargement, liver area percussion pain and other signs (see attached Record B's B.2.1).

3.2.2 Chronic phase

The clinical manifestations are relatively mild compared with the acute phase, mainly including abdominal pain, fatigue, anemia, anorexia, greasiness, jaundice and hepatomegaly, etc.

Performance (see Appendix B, B.2.2).

3.3 Laboratory inspection

3.3.1

For examination of feces or duodenal drainage, see Fasciola eggs (see C.1 and C.2 of Appendix C).

3.3.2

For surgical or pathological biopsy, see Fasciola parasites (see C.3 of Appendix C).

3.3.3

Enzyme-linked immunosorbent test (ELISA) is positive (see C.4 of Appendix C).

3.3.4

The percentage and/or absolute value of peripheral blood eosinophils increased.

4 Principles of diagnosis

Diagnosis is based on epidemiological history, clinical manifestations and laboratory test results.

5.1 Asymptomatic infection

No obvious clinical symptoms and signs, conform to 3.1, and conform to any of 3.3.1 and 3.3.2 at the same time.

5.2.1 Suspected cases

It also complies with 3.1, 3.2.1 and 3.3.4.

5.2.2 Clinical diagnosis cases

Suspected cases and also meet 3.3.3.

5.2.3 Confirmed cases

Suspected cases and meet either 3.3.1 or 3.3.2 at the same time.

5.3.1 Suspected cases

It also complies with 3.1, 3.2.2 and 3.3.4.

5.3.2 Clinical diagnosis cases

Suspected cases and also meet 3.3.3.

5.3.3 Confirmed cases

Suspected cases and meet either 3.3.1 or 3.3.2 at the same time.

6 Differential diagnosis

Should be combined with clonorchiasis, paragonimiasis, hepatic capillary worm disease, viral hepatitis, amoebic liver abscess, bacterial liver pus Differentiation of tumors and liver malignancies (see Appendix D).

Appendix A

(Informative appendix) Etiology A.1 Insect species *Fasciola* belongs to the genus *Fasciola* in the *Facialidae* of the order *Polyclones*. Its adults are mainly parasitic in the bile ducts of ruminants such as cattle and sheep, and can also be parasitic Inside the bile duct of the human body. *Fasciola hepatica* and *Fasciola macrofasciatus* (Veterinarians call *Fasciola macrofasciola*) insect).

A.2 Form

A.2.1 Adult

The morphology of *Fasciola hepatica* and *Fasciola giganteus* is very similar. Adults have flat dorsal and abdomen, leaf-like, reddish-brown, hermaphrodite, covered with skin spine. There is a protruding cone-shaped nose cone at the front end of the insect body, and the rear cone becomes wider or forms a shoulder. The mouth sucker is located on the subventral surface of the nose the suction cup is located behind the base of the nose cone. There are genital holes between the mouth and abdominal suckers. The digestive system is composed of the pharynx, esophagus and two intestinal branches.

The branch extends to the rear end of the worm body, and branches to the inner and outer sides. In the reproductive system, there are two testicles, which are highly branched, arranged one behind the other the middle of the body. One ovary, small, antler-shaped, located right behind the abdominal sucker and in front of the anterior testis. The uterus is short, coiled in the ovaries and Between the abdominal suckers, they are filled with eggs and open in the genital pores. The yolk glands are distributed on both sides of the worm, from the base of the cone to the back of the worm. Liver slices the main points for distinguishing the adult morphology of trematode and giant *Fasciola* are shown in Table A.1.

A.2.2 Eggs

The eggs are oblong, yellowish brown, with a small cover on one end. The egg shell is thin and divided into two layers. The egg is filled with multiple yolk cells, and one an egg cell that is not easily detected. The egg size of *Fasciola hepatica* is; *Fasciola gigantea* is.

A.3 Life history

The final hosts of *Fasciola* are mainly ruminants such as cattle and sheep. Humans are infected by metacercariae swallowed by raw aquatic plants and drinking raw water. its Adults parasitize in the bile ducts of the final host, and the produced eggs enter the intestines with bile, mix in feces and excrete from the body, and develop in water at a suitable temperature and hatched out miracidia, invaded the intermediate host (small soil snails and other freshwater snails of the family *Vertebridae*), and passed through the stages of larvae, mother rachis and daughter rachis After the development and asexual proliferation, it further develops to cercariae. Mature cercariae escape the snails and form metacercariae on aquatic plants or on water. End host Infection caused by accidental eating