



ABSTRACTS OF RECENT CHINESE PUBLICATIONS ON HELMINTHIASES¹ (XXII)

306. Yi, W.M., Yang, J.R. & Jin, J.N. A survey on Trichinella spiralis infection in hogs and rats, with special reference to their interrelationship. Chinese Journal of Preventive Medicine, 1987, 21 (3): 139-140 (In Chinese, with English abstract)

Trichinosis has been epidemic in Xiangfan Prefecture in northern Hubei Province, with seven outbreaks in 1984. In April 1985, the authors made an epidemiological investigation of hogs and rats in Mong Lou District which has the highest reported incidence of trichinosis in Xiangfan Prefecture.

In 332 rats examined, the Trichinella spiralis infection rate was 15%, with a rate of 14.1% in Rattus flavipectus flavipectus and of 15.4% in R. norvegicus. Examination of 16 hogs from the local market, revealed the presence of T. spiralis cysts in the intercostal muscles of 4 (25%) of them. These high infection rates in the local hogs and rats were probably due to the fact that the population in Mong Lou District did not have the habit of keeping hogs in sties. The hogs might eat dead infected rats and, in turn, rats have been seen to eat pork meat, thus creating the possibility of cross-infection between hogs and rats.

307. Zhang, H.L. & Wang, X.Y. Clinical observations on 292 cases of trichinosis. Wuhan Medical Journal, 1987, 11 (3): 178 (In Chinese)

From February 1984 to May 1986, 292 patients aged 3-65 years were hospitalized with trichinosis. These patients, who included 203 males and 89 females, all had a history of eating raw or undercooked pork and 172 of them had contracted the infection at dinners held for festive occasions. The local swine were purchased from Deng County and Xianyang County in Henan Province where the incidence of trichinosis in the herds was 50.6%.

The incubation period of trichinosis ranged from 6 hours to 36 days with an average of 17.5 days. The following clinical manifestations were observed: irregular or intermittent fever in 270 patients (92.5%), lasting from 1 to 62 days and sometimes accompanied by chills and perspiration; oedema in 288 patients (95.2%), mainly on the eyelids and the face; and myalgia in 262 patients (90%), involving predominantly the gastrocnemius and other muscles of the lower limbs, a symptom which could persist as long as six months. Laboratory findings included: elevated white blood cell counts (10 000-30 000/mm³) in 102 patients; eosinophilia in 288 patients; elevated SGOT in 42/261 patients examined and elevated SGPT in 57/260 patients. Of 277 patients for whom electrocardiograms (ECG) were made, 213 had normal ECGs while 6 showed a depressed voltage, 33 revealed sinus tachycardia, 3 revealed sinus bradycardia, 5 showed high

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voltage of the left ventricle and 10 showed incomplete block of the right bundle branch. Of 141 patients who underwent an ophthalmoscopic examination, 78 were normal and 54 had oedema of the papilla, 7 with effusion of the macula flava and 5 with haemorrhage of the papilla. The serological examinations of 19 patients were all positive. Biopsy of the gastrocnemius was performed on 68 patients and the diagnosis of trichinosis was parasitologically confirmed in 25.

All the patients were treated with albendazole at a dosage of 20 mg per kg body weight per day for 7 days, the daily dosage being divided into 3 doses. As a result of treatment, it was observed that in most patients fever subsided in 2 to 3 days, while oedema, myalgia and lassitude disappeared within about two weeks.

308. Zhang, J.Y., Wang, L.Z., Deng, Y.F., Wang, H., Zhu, K., Sun, Z.G. & Liu, J.X. Peroxidase-protein A enzyme-linked immunosorbent assay in the diagnosis of human multilocular echinococcosis. National Medical Journal of China, 1987, 67 (6): 327-329 (In Chinese, with English abstract)

Peroxidase-protein A enzyme-linked immunosorbent assay (PPA-ELISA) with antigen from purified human hydatid fluid was performed on the sera from 32 patients with multilocular echinococcosis, 103 patients with diseases other than multilocular echinococcosis and 75 healthy adults. The sera were prepared in a 1:50 dilution and an extinction value of 0.6 was considered positive. The sensitivity of the assay was 100% and its specificity 97.2%.

The extinction values (mean \pm standard deviation) of sera from patients according to disease were as follows: 1.7 ± 0.26 for multilocular echinococcosis, 0.20 ± 0.80 for cysticercosis, 0.23 ± 0.20 for intestinal parasitic diseases, 0.18 ± 0.11 for tuberculosis, 0.21 ± 0.19 for other diseases and 0.22 ± 0.08 for healthy adults.

In 31 of the 32 patients with multilocular echinococcosis (i.e. 96.9%), the titre varied between 1:100 and 1:3200 and in one patient (3.1%) it was 1:6400.

Antigen prepared from human hydatid fluid was compared to antigen prepared from mouse alveolar hydatid on sera from 19 patients with multilocular echinococcosis. The results showed no statistically significant difference.

309. Zhao, R.L., Zheng, G.Y. & Feng, X.H. Evaluation of the dot-immunobinding assay with crude and purified antigens in the serodiagnosis of human hydatid disease. National Medical Journal of China, 1987, 67 (6): 324-326 (In Chinese, with English abstract)

A crude sheep hydatid fluid antigen and a purified antigenic fraction of sheep hydatid fluid containing two major lipoprotein components were evaluated in the dot-immunobinding assay. The immunodiagnostic test was applied to sera from 79 cases of human hydatidosis, 69 cases of non-hydatid disease and 119 healthy subjects. The sensitivity and specificity of the purified antigenic fraction were 93.7% and 98.4%, respectively, and those of the crude antigen were 93.7% and 98.4%, respectively. False negative results were observed with the sera of three patients with pulmonary cyst, one patient with hepatic cyst and one patient with abdominal cyst, whereas false positive results were observed with the sera of one patient with cysticercosis and one patient with liver cirrhosis.

The sensitivity, specificity and practicability of the dot-immunobinding assay performed with both crude and purified antigens indicated that this test could be used in the diagnosis of hydatid disease.

310. Zhang, J.Y., Wang, L.Z., Deng, Y.F., Liu, B., Qiu, Q.Y. & Wang, F.R. Experimental observations on artificial infection with alveolar hydatid cysts in the gerbil. National Medical Journal of China, 1987, 67 (3): 152-154 (In Chinese)

Gerbils were found to be an ideal animal model for artificial infection with alveolar hydatid cysts. The alveolar hydatid cysts derived from human liver and mouse abdominal cavity were cut into pieces and ground to form a suspension which was introduced either into the liver or into the abdominal cavity. The results showed that according to the source of infection there was a significant difference in the infection rates of the two animal groups: 12.5% for human source and 94.7% for mouse source, whereas comparison of the gerbil infection rates according to the different routes of infection showed similar results. The germinal layer contained in the suspension would also develop into a new alveolar hydatid. At 21 days after infection, laminated and germinal layers were found and at 79 days after infection protoscolices were found.

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