

## EXPERIMENTAL PARAGONIMIASIS: THEURAPEUTICAL TESTS WITH PRAZIQUANTEL – FIRST REPORT

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*IN MEMORIAN* to Dr Lauro Travassos, father of the Brazilian and South American helminthology, with remembrance and admiration.

Paragonimiasis is a lung disease caused by species of the genus *Paragonimus* Braun, 1899. In Perú it is caused by *P. peruvianus* Miyazaki, Ibáñez & Miranda, 1969 and characterized as an endemic ailment spread mainly in the South of Cajamarca, (Ibáñez & Fernandes, 1980, *Bol. Peruano Parasitol.*, 2: 12-18).

Treatment of such parasitosis is based on the use of Bithionol, since the effectiveness of this drug was proved (Yokogawa et al., 1961, *J. Chiba Med. Soc.*, 37: 16-26).

In Perú, the use of Bithionol by humans was introduced by Roman & Grados in 1967 (IV Congreso Latinoamericano de Microbiología: 18, Lima) and continued in massive form by Yokogawa et al. (Grant-in-Aid for Overseas Scientific Survey, 1983).

However, Bithionol does not represent a good antihelminthic drug due to digestive disorders that its use causes and its parcial effectiveness, destroying only the vitelline glands, uterus and eggs of the parasite, (Ibáñez & Ortiz, 1982, *Bol. Peruano Parasitol.*, 4: 3-9).

This reasons motivated the search for other drugs with more effectiveness and tolerance. That is the case of the use of Praziquantel against *P. westermani* (Kanzaki et al., 1985, *Nippon Kyobu Gakkai Zasshi*, 23: 368-373), in a previous case which led to the testing of this drug in four two month-old *Felis catus* (domestic cat), experimentally infected with *P. peruvianus*, during investigations related to determine the longevity of such trematode.

The experimental animals and other four cats used as controls had been infected "per

os" with 20 metacercariae of *P. peruvianus* collected from the hepatopancreas of *Hypobocera gracillignata* from the Condebamba Valley, Cajabamba, Perú.

Between the days 50-60 after the infection, eggs of the parasite were observed in feces. Powdered Praziquantel, 10 mg/kg was administered orally during 10 days. After 31 days of the drug administration, the eight cats were necropsied.

It was observed that all the cats treated with Praziquantel, presented hepatized pericardial membrane containing some amorphous eggs of the parasite. It was also observed lung cysts of typical appearance, from where semidestroyed parasites were extracted, showing degenerative processes. Parasites were stained with Delafield hematoxylin and mounted in Canada balsam in order to study the internal morphology.

Subsequently two extrapulmonary parasites were found, which presented ovaries totally destroyed. All recovered parasites from cats without treatment appeared normal, as *in vivo*, concerning their internal structures.

These preliminary results allow to affirm that the Praziquantel could be used in the treatment of human paragonimiasis, with better results than Bithionol due to its greater effectiveness.

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