

论文

筛选驱除钩虫药物实验方法的研究

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摘要:

本文研究了巴西日本圆线虫在大、小白鼠(以下简称大鼠、小鼠)体内发育的规律,认为大鼠可作为筛选药物适宜的动物.试验方法为每组4只大鼠,每鼠定量接种该虫感染期幼虫400条.于感染后第11或12日给药,给药后48小时解剖,检视肠中残存虫数,并收集给药后2天内鼠粪成虫.用检获总虫数与粪便中掏出虫数加上肠中残存虫数来比较,计算出有效率或直接疗效.作者初步实验了10种已知有效驱钩药物和广谱驱虫药物,结果除土荆芥油和stilbazium iodide外,皆获得良好效果.5种已知非驱钩药物则皆无效.本方法所用粪便掏虫结合解剖检虫法,不需要设对照组,较国外的方法简便经济,而且准确可靠.

关键词:

A NEW SCREENING METHOD FOR ANTHELMINTICS AGAINST HOOKWORM BY USING NIPPOSTRONGYLUS BRAZILIENSIS IN VIVO

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Abstract:

The development of *N. braziliensis* was studied both in rats and mice. From the observations made on the development rate of adult worms, the worms' distribution in the small intestine, and the number of worms passing out spontaneously, it was concluded that rats are better laboratory animals for our purpose than mice. A routine technique for screening anthelmintics against hookworm *in vivo* was established. Young laboratory rats (90-110 g in wt.) are each inoculated subcutaneously with 400 active *N. braziliensis* infective larvae, and after 11 or 12 days, drugs to be tested are given per os. A group of 4 rats are used for each drug, and no control group is necessary. Faecal material is collected for 48 hours and the rats are then sacrificed, worms being searched carefully both in the intestines and in the faeces. The total number of worms in the intestine and faeces of the whole group of animals are counted, and the ratio is termed the direct therapeutic index: Among the ten known antihookworm drugs and broad-spectrum anthelmintics tested, eight were highly effective, the therapeutic index being 69.5-100%. Oil of chinopodium and stilbazium iodide are the only exceptions. Regarding the drugs known to be ineffective against hookworms, the therapeutic index was almost nil. The results appear to prove that the new method is not only time saving and economical but also more accurate as compared with the methods reported previously.

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