AUTHOR	CHUSATTATAYANOND,W
ORIGINAL TITLE	Vaccination of animals against infection
DEGREE	PhD
YEAR	1983
INSTITUTE	University of Peradeniya
LOCATION	UP(MED)
MAIN HEADING	FILARIOIDEA
ABSTRACT	Normal infections of the filarial parasite, Brugja pahangi, in jirds (Meriones unguiculatus) were studied to compare the results of the subcutaneous and intraperitoneal routes of infection, the responses of. the two sexes and to determine the number of animals to be used in each group in tile subsequent experiments. The possibility of developing a vaccine against filarial infection was investigated using the B. pahangi-jird model. The experiments involved the use of 'non-living and 'living' vaccines. Non-living vaccines were a somatic antigen which Has derived from adult worm homogenates and a metabolic antigen which had been released by adult parasites during in vitro cultivation. Living vaccines were the live infective stage of the parasites attenuated either by radiation from a Cobalt 60 source or by the chemoprophylactic use of the broad spectrum anthelmintic flubendazole. The level of resistance in jirds was determined by the reduction of both number and size of the adult worms recovered after challenged with known numbers of infective larvae. Non-living vaccines were found to be unsuccessful in producing protection. Live-attenuated vaccines were shown to give more promising results. Jirds receiving irradiated infective larvae which had been exposed to different levels of radiation all showed some degree of resistance. More interesting results were obtained from ,the experiments with flubendazole. The drug itself was shown to have excellent prophylactic activity and jirds receiving infective larvae during the period of drug activity showed a significant level of resistance against reinfection "When subsequently challenged. ELISA was used to detect specific antibody against antigen derived from crude soluble extract of adult Harms (CSE) during the course of infection in every experiment. Peroxidase - conjugated rabbit anti-hamster IgG obtained from commercial sources was used. It was found that IgG level against CSE had no correlation with the level of resistance found in vaccinated jirds.