maintained between 50 and 150 mg. per 100 cc. 5. The method employed is practicable and provides an ideal concentration of bromide in the blood.

7747 P

Concentrated Fouadin in Treatment of Schistosomiasis Japonica in Rabbits.

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Khalil *et al.*[1] and Khalil[2] found that fouadin—antimony III-pyrocatechin-disulphate of sodium—was very efficacious against bilharziasis. Lee[3] and Lee and Chung,[4] however, did not obtain the same result in *Schistosomiasis japonica*. For treatment of this disease, a related compound of calcium salt called "Concentrated Fouadin", has been manufactured. Apart from its composition, the new drug is said to differ from fouadin in being more concentrated and less irritating. It contains 11% of antimony III-pyrocatechin-disulphate of sodium and calcium and is issued in ampoules. Each cc. of the solution has 14.3 mg. of Sb. III and 7 mg. of calcium.

To obtain experimental subjects, young rabbits of 1.5 to 2 kg. in weight were infected with the fork-tailed cercariae of *S. japonicum*. On the discovery of the ova in the feces, the animals were given 6 weekly intramuscular injections of Concentrated Fouadin until the eggs disappeared or died as determined by the hatching test. During treatment, particular attention was paid to the daily weights and to the appearance of toxic symptoms as a guide to the regulation of dosage. Thus it was found that the following scheme of administrations was well tolerated: an initial dose of 0.15 cc. followed by 0.25 cc. and 0.3 cc. for the second, third and subsequent injections respectively.

The effects of the drugs were judged from the findings at autopsy when the condition of the lungs, the liver and intestine was noted

[1] Khalil, M., Nazmi, M., Peter, F. M., El Din, M., Salach and El Betash, M. H., *Deutsch. med. Woch.*, 1929, **55**, 1125.

[2] Khalil, M., and Betasche, M. H., *Lancet*, 1930, **1**, 234.

[3] Lee, C. U., *Chinese Med. J.*, 1932, **46**, 1169.

[4] Lee, C. U., and Chung, H. L., *Chinese Med. J.*, 1933, **47**, 1411.

and the blood vessels in the lungs, the portal and mesenteric veins and inferior vena cava were searched for the presence of the worms. Tissues of the lungs, liver and intestine were also examined under a trichinia press to observe the condition of the ova.

Results. Of the 45 rabbits exposed to infection, only 27 were found suitable for the experiment, the results of which are given in Table I.

TABLE I.

		Amount of Concentrated Fouadin Used	Duration of Treatment (Days)	Killed (Days after Infection)
1. Cured	14	In 11 rabbits between 5.30-6.60 cc. Average: 6.20 cc. In 2, between 7-7.30 cc. In 1, 12.30 cc. in two courses	In 12 rabbits between 22-38 Average: 28.25 In 2, in 46 and 54 days respectively	From 99 to 268
2. Uncured	1	7.30 cc.	38	108
3. Died during treatment	5	1.20-6.00 cc.	5-28	Died: Majority between 58-75
	20			
Controls	7			Died: 3 in 96-98 days and 2 in 60 days Killed: 2 in 63 and 208 days respectively

Fourteen out of 20 animals were considered as cured because when killed after the controls had died of the infection, 9 had no worms and the ova in the tissues were not viable; 4 had only male worms and the ova in the organs were dead; one had parasites of both sexes but the females were few in number (4) and the eggs were dead.

One rabbit was pronounced uncured because 15 couples of worms which had normal gonads were found, and some living ova were seen in the liver and intestinal mucosa.

In connection with animals that were found free from the infection, it is to be noted that the total amount of Concentrated Fouadin used was not less than 6 cc. per animal and the duration of treatment was not less than 3 weeks.

Of the 5 which died, only one completed the course of injections which killed the flukes; the rest died during the treatment. Microscopically, the livers showed greater degree of generalized fatty

change than was seen in those of the control animals. Death, which took place at an earlier period than in the controls, may therefore be said to have been hastened by the action of the drug.

Five of the 7 controls died of schistosomiasis with cirrhosis of the liver in from 60 to 98 days, and 2 survived because the infection was light. All animals lost weight and were in poor health. It is to be remarked that in these animals, some ova (from 20 to 50%) were observed to die in the tissues even without any treatment.

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Possible Application of Chemical Reactions in the Determination of Pregnancy.*

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It is generally conceded that the reaction of the Ascheim-Zondek test depends upon the presence of a hormone in the urine of the pregnant woman. This hormone is believed to be either antuitrin, from the pituitary gland, or the so-called antuitrin-like hormone, from the placenta. Any chemical test that would be specific for either of these hormones would in all probability constitute a satisfactory test for pregnancy, which, if the test could be made simple enough, would have great advantages over the biological tests now in general use.

We have found that under carefully controlled conditions, that is, in a solution neutral to brom thymol blue, the commercial preparation of antuitrin will invariably reduce the oxidation-reduction dye, o-chlorophenol indolphenol, from blue to pink. The antuitrin-like hormone, commercial antuitrin S, will not cause this reduction, but both it and the antuitrin will reduce l-naphthol-2-sulfonate indophenol in an alkaline solution. These reactions can be obtained in water solution or with non-pregnant urines to which comparatively large amounts of the commercial preparations have been added. This test, simple and definite, gives promise of an excellent test for pregnancy.

In its practical application, however, it is necessary to extract the

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