the animals to grow at approximately the same rate as the rats in Group I. Those in Group IV (10 rats) were maintained on Purina Chow *ad lib.* Blood pressure readings were determined on the rats under light ether anesthesia by the microphonic method of Friedman and Freed (*3*). Readings were taken at the beginning of the study and once weekly for 9 weeks.

The rats in Group I exhibited a pronounced degree of generalized flaccidity of the skeletal musculature. Growth was restricted, their weight increasing from an initial average of 116 g to an average of 152 g after 9 weeks. Otherwise, they appeared in good physical condition. The animals in Group II, receiving supplemental potassium, were in excellent health. Their weight increased from an average of 115 g to 234 g. Those in Group III maintained approximately the same weights as Group I. The rats of Group IV grew from an average of 111 g to 346 g.

Our findings revealed that the rats maintained on the potassium-free diet (Group I) exhibited a steady decline

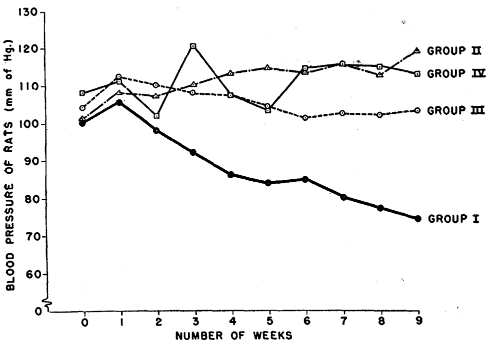

FIG. 1.

in blood pressure (Fig. 1) after the second week, from an average initial reading of 100 mm of Hg (range, 92–116 mm). At the end of the fourth week the blood pressures averaged 86 mm of Hg (range, 80–102 mm). At the end of 9 weeks the average pressure was 74 mm of Hg (range, 68–86 mm). Animals in the control groups, II, III, and IV, showed no marked deviation from normal in their pressures.

Our results indicate that rats on a diet deficient in potassium develop a profound hypotension. Other rats on an identical diet but supplied with potassium, maintain a normal blood pressure. A third group of animals on a standard diet, but partially starved to grow as slowly as those in Group I, also had a normal pressure. It would appear, therefore, that the hypotension observed was due to a specific deficiency in potassium. The possible mechanisms for this action are now under investigation.

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C-M Medium: A Mounting Medium for Small Insects, Mites, and Other Whole Mounts

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Past experience in mounting mites has shown that the existing media are not completely adequate in many respects. A mounting medium was therefore sought that would permit ease and speed in mounting and yet have a refractive index that would give better definition of the morphological and gross histological structures. Experimentation was carried out using methocellulose, and the following formula was evolved:

Methocellulose[3]	5 g
Carbowax 4,000[4]	2 "
Diethylene glycol	1 ml
95% Ethyl alcohol	25 "
Lactic acid	100 "
Distilled water	75 "

The methocellulose and alcohol are mixed, added to the remainder of the formula, and filtered through glass wool. The medium is then placed in an oven at 40°–45° C for 3–5 days, or until it has reached the desired consistency. If it becomes too thick the viscosity may be reduced by warming gently or by thinning with 95% ethyl alcohol or water.

Specimens cannot be transferred directly from glycerine, strong acids, or bases such as KOH clearing solution. It was found, however, that specimens cleared in KOH could be mounted safely if they were first rinsed in acid-alcohol.

Acarina, larval cestodes, nematodes, and insects (larvae and adults) have been mounted with excellent results. The best procedure for mounting mites was to clear thoroughly in lactophenol before mounting. At times a slight shrinkage occurs, but this can be reflected by warming the lactophenol solution and the mites slightly. Mosquito larvae mounted well by passing through cellusolve into the medium. Some of the more delicate specimens needed no special clearing procedure but were placed directly into the medium, thereby allowing the lactic acid in the medium to clear the specimen.

Some of the favorable characteristics of the C-M medium are as follows:

1. It has an excellent refractive index for arthropod tissues, namely, 1.428.

2. It is not visibly affected by light (does not turn yellow as does balsam).

3. It is heat-stable at average temperatures (slides were held at 55° C for 6 months without visible change).

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[2] The authors are grateful to Roderick Craig for his advice and many helpful suggestions.

[3] Methocel, furnished by Veronal Chemical Company.

[4] Supplied by Carbide & Carbon Chemicals Corporation.

4. It acts as a temporary ringing compound. (Although it does not replace standard ringing compounds, it forms a temporary protection for the specimen.)

5. Specimens may be mounted from xylene, toluene, water, alcohol, cellusolve, lactic acid, lactophenol, or a number of other preservatives and clearing agents, or specimens may be placed in the mounting medium alive.

6. It does not crystallize (there were no signs of crystallization after slides were held at 55° C for six months).

Enhancement of the Action of Streptomycin

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Various attempts have been made to enhance the action of streptomycin, either by combining it with other drugs such as potassium iodide (*1*) and *p*-aminosalicylic acid, (*2, 3*) or by making a compound with *p*-aminosalicylic acid ([*4*], intracerebral method). In the present investigation we have used the rabbit and mouse corneal methods (*5, 6*) in order to determine the activity of such combinations.

Combination of streptomycin and potassium iodide. In the first of two experiments 12 rabbits were used; 6 were infected in both eyes and 6 in the right eye only. Treatment was started on the 7th day, when all inoculated animals had developed very early lesions. In the group of 6 animals bilaterally infected, the right eyes received streptomycin and potassium iodide, and the left eyes received streptomycin only. Ten mg of streptomycin was given twice weekly, and 10 mg of potassium iodide was given thrice weekly, all by intravitreous injection. Of the 6 animals in which only the left eyes were infected 3 received thrice weekly injections of potassium iodide and the other 3 were untreated controls. Treatment was continued until the 60th day. The results are shown in Fig. 1, in which the size of the corneal lesion is plotted against time.

In the second experiment 10 rabbits were used, 8 of which were infected in both eyes and the other 2 in the right eyes only. Treatment was withheld until the 16th day, when all inoculated eyes had developed more advanced lesions, with early caseation. The treated group consisted of the 8 animals with bilateral corneal infection; the right eyes received streptomycin and potassium iodide, and the left eyes streptomycin only. The remaining 2 animals served as untreated controls. Treatment was as in the first experiment but was continued for 72 days, and the experiment was finally terminated on the 147th day. The results are shown in Fig. 2.

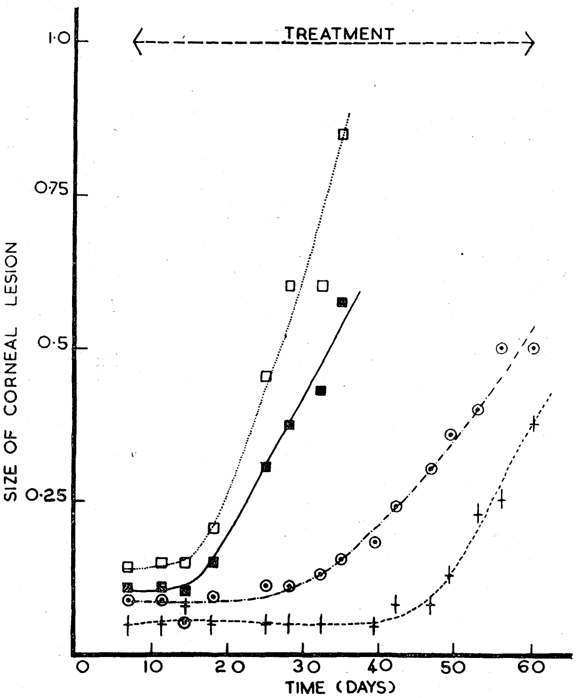

FIG. 1. Effect of combined streptomycin and potassium iodine in early tuberculous corneal lesions in rabbits.

——■—— = control group

....□.... = potassium iodide group

-----⊙----- = streptomycin group

-----+----- = streptomycin and potassium iodide group

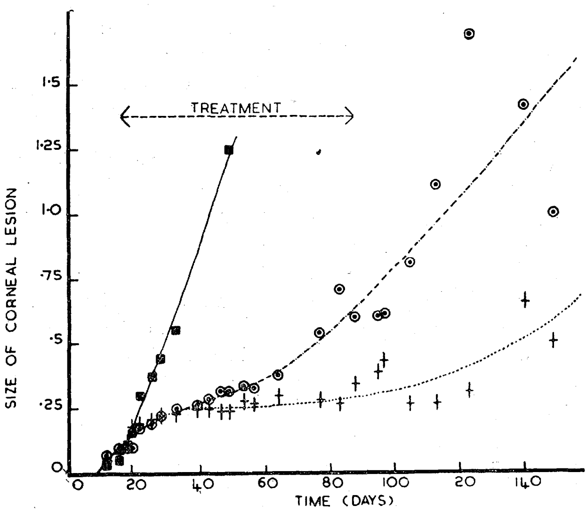

FIG. 2. Effect of combined streptomycin and potassium iodide in later tuberculous corneal lesions in rabbits. (Legends as in Fig. 1.)

[1] At present on the scientific staff of the Medical Research Council.

[2] We are grateful to the W. H. Ross Foundation (Scotland) for the Prevention of Blindness, which defrayed some of the expenses, and to the Medical Research Council for the supply of radioiodine. The streptomycin was kindly supplied by the Tuberculosis Study Section of the U. S. Public Health Service (through Dr. Schmehl), the streptomycin *p*-aminosalicylate by Chas. Pfizer & Co., Inc. (through Dr. Hobby), and the *p*-aminosalicylic acid by Herts Pharmaceuticals Limited (through Mr. Seymour).