

on a regular slide for study with dark field illumination. In essentially the same way pieces of tissue were placed in plasma under a cover glass and sealed. Precautions to secure aseptic conditions were taken.

This method keeps trypanosomes living, growing and dividing, and thus many of the stages described by various authors either in the host itself or in the transmitter have been studied in vitro. It is evident that this method may be employed not only for blood parasites but for all protozoan forms which are parasites in cells and thus affords another method of approach for the solution of the complicated life cycles of parasitic Protozoa.

37 (969)

The influence of depancreatization upon the state of glycemia following the intravenous injection of dextrose in dogs.

By I. S. KLEINER and S. J. MELTZER.

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In former experiments¹ it was shown that after the intravenous injection of large amounts of dextrose (4 g. per kilo) into dogs the sugar rapidly disappears from the blood stream so that after 1½ hours after the end of the injection the blood-sugar falls nearly to its original figure. In the present experiments the same procedure was carried out on completely depancreatized dogs. In these cases the blood-sugar did not fall to its original value or near it; at the end of 1½ hours it was on the average more than twice as high. The following is a comparison of the average figures:

	Blood-sugar,			Dextrose in Urine, Per Cent. of Amount Injected.
	Before Injection.	End of Injection.	1½ Hours After End of Injection.	
Normal (5)	0.20	0.79	0.27	> 43%
Depancreatized (9) .	0.38	1.19	0.86	49% (uncorrected for "diabetic" sugar).

¹ See *Proceedings of the American Physiological Society*, Vol. 33, 1913, p. xxvii.

A similar difference was observed also in nephrectomized dogs.

It is claimed by some investigators that the glycemia following depancreatization is due to an over-production of sugar. It is evident that the hyperglycemia in our cases of depancreatization can not be due to such a factor. We shall not discuss here whether our results can be adequately explained by the assumption that the removal of the pancreas causes a decrease of consumption of dextrose by the body tissues. We wish, however, to indicate that some of our facts hint at the possibility of a change in the permeability of the endothelia of the circulatory apparatus as a factor in the results of depancreatization.

38 (970)

The influence of the intra-intestinal administration of magnesium sulphate on the production of hyaline casts in dogs.

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Following our study of hyaline cast production after the intramuscular or intravenous injection of hydrated magnesium sulphate and certain other salts, reported to this society in February and June of this year,¹ Dr. Meltzer suggested that the investigation be carried further by a series of experiments in which the $MgSO_4$ was given directly into the intestines, simulating its use as a purgative.

The typical procedure in the present series was to inject an $m/1$ solution of hydrated $MgSO_4$, in doses of .18 or .2 gm. per kilo. body weight, through a glass cannula into the upper duodenum. The small intestine was isolated by ligatures just below the pylorus and at the ileo-cecal valve. The operation was performed under complete ether anesthesia and the dogs were killed at the end of five or six hours. For two animals the solution was diluted to $m/3$ before injection and in three other cases the ligature was not placed at the ileo-cecal valve. In each case control urines were examined for casts and albumin.

¹ PROC. SOC. EXP. BIOL. AND MED., Vol. XI, No. 3 (879); Vol. XI, No. 6 (919).