necrosis differing from previously described liver-necrosis. With this necrosis there is associated a fibro-blastic proliferation giving the picture of an early intralobular cirrhosis.

27 (1205)

The comparative effect of adrenalin on the pupil and blood pressure in cats and rabbits.

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Several years ago Meltzer showed that there was a striking difference in the response of rabbits and cats to instillation of adrenalin in the eye after excision of the superior cervical ganglion. Whereas in rabbits full dilatation was obtained by a single instillation, in cats it was obtained inconstantly and only after very numerous instillations.

In order to determine whether this difference in behavior was due to a difference in the susceptibility of the iris in the two species to adrenalin, I gave this by intravenous injection and made a quantitative study of the iris on both the normal and gangliectomized sides. I found that contrary to expectation, the iris of the cat was much more sensitive than that of the rabbit both in the intact and gangliectomized eye. Whereas 0.1 mg. per kilo, caused in the rabbit only slight dilatation of the normal pupil, this dose caused maximal dilatation in the normal pupil of the cat. On the gangliectomized side 0.01 mg. per kilo which had very little effect in the rabbit, caused almost maximal dilatation in the cat.

It was noted however that the duration differed in the opposite direction, being much greater in the rabbit. Thus a dose of 0.1 mg. per kilo, which caused dilatation lasting half an hour in the gangliectomized cat's pupil, caused dilatation lasting more than three hours in the rabbit. Smaller doses showed a similar relation.

In order to determine whether this relationship is true of smooth muscle in general or is limited to the iris, I studied the rise of blood pressure in the two species. The results showed that

with all doses the average effect of intravenous injections of adrenalin on the blood pressure was greater in the rabbits than in the cats both in regard to the height and the duration of the rise.

We may then conclude that the difference in the effect of instillations is not dependent on greater sensitiveness of the iris of the rabbit and that the greater sensitiveness of the cats' dilator muscle to the action of adrenalin is not shared by all other smooth muscle.

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Proteose intoxications and body protein injury.

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Proteose injections in dogs cause well-known clinical reactions —vomiting, diarrhea, temperature reactions, low blood pressure, prostration and after large doses, an excess of antithrombin with incoagulable blood. A single proteose injection—for example one half a lethal dose—causes abrupt clinical reactions in a normal dog with apparent complete recovery within 24 to 48 hours. The nitrogen elimination curve in a fasting dog under such conditions shows a great rise in total urinary nitrogen. The apex of the curve usually falls on the second 24-hour period following the injection. This rise may be over 100 per cent. increase above the mean base line nitrogen level. It does not fall promptly to normal but declines slowly in 3 to 5 days or more toward the original base line. This speaks for a definite cell injury with destruction of considerable protein substance due to a single proteose injection. The disturbance of cell equilibrium is not rapidly nor promptly restored to normal.

A dog which has received previous proteose injections is somewhat immune or tolerant to subsequent injections of proteose. Such dogs, as a rule, show less intense clinical reactions and less rise in the curve of nitrogen elimination following a unit dose of standard proteose as compared with normal or non-immune con-