

any one time to obtain a sufficient quantity for positive identification. This difficulty is naturally greatly increased when two or three days are allowed to elapse between feeding and the removal of the intestinal content. The intestinal content is then very small and contains so much bile that it is very difficult to handle. Out of six experiments on dogs in only one was I able to obtain a sufficient amount of a platinum salt for analysis.

It was my intention, in these experiments, to determine whether the lecithin content of the food could give rise to cholin and possibly neurin by decomposition in the intestine in cases of obstruction. The dogs used were therefore fed for two or three days before the operation of closing the intestine was performed, on the yolk of eggs, which is very rich in lecithin.

The following protocol from my notebook will serve to illustrate the entire series of our experiments:

Exp. 3. Friday, March 29th, 2 p.m., anesthetized dog, male, weight 55 lbs. Placed ligature around intestine just above ileo-cecal valve. Animal had been fed for three days previously on yolk of eggs. Saturday, March 30th, 6 p.m.—Animal quiet, does not seem very sick, drinks well but does not eat. Urine of sp. gr. 103.2, acid in reaction, no albumin, strong indican reaction. Sunday, March 31st—Dog drinks but does not eat, appears much the same, urine 274 cc., sp. gr. 102.8, reaction acid, no albumin. Indican reaction strong. Monday, April 1st—Dog seemed better, but about 2 p.m. managed to tear open the incision in the abdominal wall, and in consequence a loop of the intestine escaped. Dog was killed with chloroform and an autopsy made. Urine for this day up to this time, 160 cc., sp. gr. 103.1, reaction acid, strong indican reaction. It may be said that in no case was there any marked anuria, as the dogs drank freely and did not vomit. As far as the indican reaction was concerned it was strong, but not much more so than I have seen in apparently healthy dogs.

It must be remembered that the indican reactions as usually made cannot be considered quantitative, as the color is produced by oxidation of the indoxyl which cannot be regulated to give quantitative results, as the same agent at the same time produces indigo red and indigo white. I consider Baumann's the best test, namely, equal volumes of urine and strong hydrochloric acid with a few drops of ferric chloride, as there is less chance of overoxidation by this method.

*Autopsy.*—Evidences of peritonitis, some excess of peritoneal fluid containing flakes of fibrin, intense venous congestion. This was found to be due to perforation at point of ligature. There were slight adhesions between neighboring intestinal loops. Renal cortex much engorged, papille pale, capsule non-adherent. Liver hyperemic, consistence normal, gall bladder distended, contents