

upon the fact that when phloridzin is injected subcutaneously, glycosuria appears in 15 to 30 minutes in a healthy condition of the kidneys and continues from one to three hours. The test is made by injecting subcutaneously 1 c.c. of a sterile 1 per cent. solution of phloridzin and testing the urine for sugar at intervals of five minutes by Fehling's or Haine's solution.

(c) Cryoscopy, described by Koranyi, and recommended and much employed by Kummel, Teakin and others, consists in the determination of the molecular concentration of the blood serum and urine by measuring the freezing-points of the blood and urine. It depends upon the fact that in health the blood maintains a definite degree of molecular concentration, and has a practically constant freezing point, 0.55 to 0.57 deg. The excreting power of the kidneys is the most important factor in maintaining the constant molecular concentration of the blood. In conditions in which the renal parenchyma is damaged and the power of excretion lessened, the molecular concentration of the blood increases, on account of the accumulation of salts in the blood, and the freezing point is lowered to 0.60 deg., or lower. Cryoscopy of the blood seems to give us definite and valuable information as to the total renal functional power. It does not give us any information as to the relative capacity of the two kidneys. Cryoscopy of the urine seems to be of little practical value, not more than a determination of the specific gravity.

#### ROENTGEN EXAMINATION.

The introduction of the Roentgen rays as a means of diagnosis marks the most important advance made in the surgery of renal and ureteral calculi in modern times. The present improved technique has rendered this means of diagnosis sufficiently accurate to entitle it to rank with other commonly employed means of diagnosis of generally recognized value, such as the examination of sputum and urine for tubercle bacilli, feces for blood and parasites, etc.

The accuracy of the method depends upon the skill and experience of the operator making the examination and the interpretation of the plate, the efficiency of the apparatus at hand, and the technique employed. The following reports show the percentage of correct diagnosis as reported by the several observers in their own work:

	Cases.	Correct.
Kummel and Rumpel, 1903 . . . . .	18	100 per cent.
Smith and Bevan, 1904 . . . . .	27	96 "
Leonard, 1907 . . . . .	356	97 "
Brewer, 1908 . . . . .	57	78 "