The patient made a prompt and satisfactory recovery. Twenty-four hours after the operation, the temperature had dropped to 100 deg. F., and the leucocyte count to 16,000. Three days after the operation the temperature was normal and the leucocyte count 7,000. The wound drained a large amount of rather foul pus for two weeks, after which it healed without incident. Cultures from the infarcts showed pure colon bacillus infection."

The kidney may be infected by a variety of pus-producing micro-organisms. The streptococcus, staphylococcus, the typhoid bacillus, Friedlander's diplococcus, the bacillus of diphtheria, the bacillus pyocyaneus, and the pneumococcus, have all been isolated from renal abscesses. The most frequent infections are, undoubtedly, due to the colon bacillus and to pus organisms. In two of Dr. Cobb's acute cases, small stones were found embedded in one of the calices, in one a very small calculus on the floor of the bladder was discovered by the cystoscope, and in a fourth case a nephrectomy for stone had been done a year previously. In all probability a frequent cause is an abnormality of the ureter, due to stricture, the result of inflammation or calculi; in women, deformities in the ureter may be caused by pregnancy or childbirth. Infection, so far as known, usually comes from the intestinal canal, although it may come from the reproductive organs and lower urinary tract in the female, especially in those cases where old pelvic disease with intestinal adhesions is present.

Diagnosis:—In the acute fulminating cases there may be nothing pointing to the kidney except tenderness in the costo-vertebral angle—this, Dr. Cobb observes, has been a constant sign. These acute cases present an exact picture of an acute abdominal infection—sudden abdominal pain, tenderness, muscular spasm, vomiting, high temperature, pulse, and leucocyte count. In such cases, unless blood and blood casts, with or without pus, are found in the urine, or an enlarged and tender kidney can be palpated, a positive diagnosis cannot be made. In the less acutely sick cases the condition of both kidneys should be studied by ureteral catheterization and X-ray. Leucocytosis is always high in the acute cases, 18,000 to 36,000. It is Dr. Cobb's opinion that in acute cases in which positive evidence of the kidney cannot be obtained, it is better to make a preliminary anterior incision to settle the diagnosis and the existence of the other kidney as quickly as possible. Delay, even long enough for ureteral catheterization, may be dangerous. The presence of albumin, pus and blood in the urine, associated with tenderness in the costo-vertebral angle, and a high white blood count, should point to