

inch. On section the organ presents a honeycombed appearance. The stroma is reddish brown in color and very dense, and in the meshes are numerous smooth-walled cysts. From most of them a clear amber fluid escapes, while others contain a firm, amber-colored, jelly-like material which is retained in the cavities after section. These cysts are distributed throughout the organ, in cortex and medulla alike. They do not communicate. The size varies from $1\frac{1}{2} \times 1$ inch to something microscopic. The pelvis is small, the lining is velvety and white. There is a deposit of fat about it.

The cyst fluid collected from a single cyst is dark amber, clear, odourless, acid. Urea is present in small amount.

Heat.—Slight precipitate much increased with HNO_3 .

HNO₃.—Abundant, curdy precipitate almost entirely dissolved on heating.

Under the microscope this precipitate shows urates and radiating figures of urate of soda.

Microscopically the sediment shows renal epithelium swollen and granular. Large compound granular cells. Cholestearine crystals in abundance. Large ovoid bodies like fat, but less refracting.

The fluid collected on section of the whole organ gave the same chemical reactions, sp. gr. 1012, and microscopically well marked renal epithelium; many caudate epithelial; few pus cells; red blood cells; many coarsely and finely granular cells and pus casts.

Histologically.—The cyst wall is made up of a fibrous portion (varying in thickness in different cases) lined by a layer of flattened epithelium. The fibrous layer is in relation with the stroma of renal tissue which also varies greatly, in some cases showing abundant new formation of connective tissue in varying stages of maturity, and in others a renal tissue not so much fibrosed as compressed. There appears to be a considerable quantity of secretive tissue remaining, but it is rarely normal. The tubules and glomeruli are either compressed (as before stated), or give evidence of increased pressure from within as shown by the flattened appearance of the epithelium, or dilation of the space. Many of Bowman's capsules are greatly distended and the vascular tuft forced to one side, while others show marked fibroid change in the capsule with contraction upon the tuft. In some tubules there are small dilatations occupied by masses of colloid material, and many of the dilated Bowman's capsules are filled with the same material. Coats considers these the starting point of the cysts.

In considering renal cysts in connection with this specimen, it is, I think, obvious that such conditions as hydatid and dermoid cysts may be set aside. Of the *simpler forms* there is the cyst of chronic interstitial nephritis, where we find in a small contracted kidney a varying number of cysts, usually small in size and with an almost constant distribution throughout the cortical area alone. These are universally looked upon as retention cysts, having their seat in the Bowman's capsules and the convoluted tubules.

There is then the *General Cystic Degeneration of the Kidney*, the so-called *Congenital Cystic Kidney*, where, in an enlarged organ, cysts