

Naunyn and Courlies think them adenomatous.

In *Clifford Allbutt's System of Medicine* they are described as a pure degeneration within the tubules with dilatation, producing pressure upon, and atrophy of, the the tissues about. Associated cysts of the Liver and Spleen are considered important as a guide to the origin.

Loomis & Thompson consider it a general cystic metamorphosis of the renal tubules and Malpighian bodies with atrophy of renal tissue about.

Treeves says:—In the *infant* it is a degeneration of embryonal tissues. In the *adult* an adenomatous formation.

Coats regards them not as retention cysts, but as the result of a perverted secretion of the renal epithelium. They are obviously growing structures, he says. In the tubules he finds masses of colloid material which he looks upon as a perverted secretion of the cells: these accumulations produce dilatation of the tubules, and a continuance of such secretion results in the well formed cysts, which with their pressure effects, are seen in the surrounding tissue. He says "an origin such as this would be consistent with cystic disease in other organs."

An explanation from a developmental point of view is given by *Shattuck*, who thinks they result from a combination of the *Mesonephros* (Wolffian Body) and the *Metanephros* (Kidney proper), the cysts arising from the former in the substance of the latter.

Some General Points about general Cystic degeneration of the Kidney:—

- (1) More frequent in males than females.
- (2) Usually bilateral, always so in infants.
- (3) Disease may be more advanced on one side than the other.
- (4) Organ always enlarged, but retains its general outline well.
- (5) Weight usually $\frac{2}{3}$ lbs. Hare's case 16 lbs. is an extreme case.
- (6) Cysts are found in every part of the organ.

Of course the number and size of the cysts and the changes in the remaining kidney tissue will be in direct ratio to the stage of the disease. The Cyst walls have their *membrana propria* or fibrous portion, with a lining of flattened epithelium. The Pelvis is usually contracted and may be filled with or surrounded by fat.

The ureter is narrow, the vessels small.

The cysts do not communicate with each other, or with the pelvis.

The *cyst contents* may be fluid, viscid or solid. In *color*, vary from pale amber to purple or haemorrhagic.

The Cysts contain—Fat and epithelium, Cholestearin, Uric Acid and some say triple phosphates. Urea is present.

This condition of kidney may give rise to no signs whatever during life. The most common, however, are those of chronic interstitial nephritis as shown by urinary examination and signs of cardiac hypertrophy. There may be haematuria; *Coats* reports a case in which there were recurring attacks during 18 years. Death is usually from uraemia.