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## Selections: Medicine.

### MINUTE ANATOMY OF THE KIDNEY.

*Royal Medical and Chirurgial Society.*

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The size and shapes of all casts are found to correspond with the excretory system of renal tubuli. Their most fertile source Dr. Southey believes to be the collecting tubes or ascending straight tubes of the third sub-division; in these are found the ordinary urate infarcta of new-borns, and the granular and fibrinous casts of chronic renal degeneration. The fine fatty streakings and lime deposits of old persons are seen more strictly limited to the transparent midway channels or down-loopers. The largest old fatty granular casts, which consist of cellular débris, leucocytes, fat dottings, and urinary salts, are doubtless cast or moulded in the gathering mains close to the orifices of the papillæ, but cannot be held to be secretions from the tortuous secreting tubes deprived, as has been by some supposed, of their epithelial linings. The value of casts in deciding the diagnosis and estimating the advancement of renal diseases has been much over-rated. Their different forms and appearances are derived in part from the materials of which they are composed, but in greater part are due to the length of time during which the gelatinised plugs of fibrinous material derived from the blood-serum have resided in the passages whose mould they take, the degree in which they have been soaked with urinary salts and stained with urinary pigments, and become degenerated. After many years' vain search for them, nothing

like a desquamative shedding of the epithelium lining a tortuous tube has ever been observed by the author. And although red and white blood-cells, leucocytes, and escaped nuclei have been constantly observed in acute nephritis entangled in fibrinous plugs, the actual linings of the straight collecting tubes, with their low, sessile, columnar epithelium, have as such never been recognized by him. To form any clinical inference as to the nature and extent of renal disease from the sediment of the urine and tubal casts is about as unsafe as forecasting the issue of bronchitis or pneumonia by the expectoration. It is not that the casts or the character of the expectorated matters have no clinical value, but they have a relative one only. In renal disease, the casts should be appraised side by side with the diurnal urea excretion, and considered in reference to the quantity of albumen excreted at different periods of the complaint.—Dr. George Johnson said that he differed almost totally from Dr. Southey's statements, which, if true, would show that there was very little diagnostic value to be set upon the study of renal casts. The author's main argument rested on the assumption that all the convoluted tubes were connected with the looped tubes; but this could not be proved, and Dr. Johnson much doubted it as a fact, for he was quite certain that casts formed in the convoluted tubes do appear in the urine. For example, in cases of renal hæmorrhage from turpentine, casts appear in the urine formed of blood, which it is perfectly certain, comes from the system of the Malpighian capillaries; such casts are moulded in the convoluted tubes, and often appear quite convoluted themselves. Casts formed of white