

School and Hospital in a record of 125 consecutive cases of the analyses of the urine in ether anaesthesia. All operations on the kidneys were excluded because it was noticed that such cases developed a more severe form of nephritis than one would expect from the anaesthetic. One hundred of the patients had normal urine before operation, and of these no less than 77 had albumin in the urine after operation. Of these 77, there were 65 with casts as well as albumin. The 65 cases with casts exhibited in 20 cases hyaline casts only, 28 hyaline and finely granular casts, 15 hyaline and finely and coarsely granular casts, whilst in 2 there were hyaline, granular and epithelial casts and blood. Of the 25 cases in which the urine was abnormal before operation, the symptoms of kidney trouble were exaggerated after anaesthesia. In ten of these cases; for example, where there had been a mere trace of albumin and no casts before ether there were found hyaline and granular casts after anaesthesia; of the 125 cases two died of suppression of urine. Chloroform was administered in all my cases, and I am convinced it is the safer anaesthetic.

The effects produced by the different methods of dealing with cases of nephritis have been widely discussed and some experimental work has been done to endeavour, if possible, to determine the structural changes in the kidney and its immediate surroundings as the result of splitting the capsule or after capsulectomy. Within the last few months I operated upon a number of dogs in order to satisfy myself regarding the effects thus produced. One can very readily demonstrate that the capsule is rapidly reformed after its removal in the dog. In fact I can show you a specimen which to the naked eye appears as if a delicate new capsule were formed 24 hours after removal. The explanation of such a startling result is quite simple. Dr. Johnson⁵ of San Francisco stated some time ago that the renal capsule in a dog consisted of two layers, the outer of which is the thicker. In decapsulation the outer layer comes away leaving the inner layer lacerated, but still adherent. The reason one finds that the kidney appears to have a new capsule, if it is examined as short a time as 24 hours after operation, is that the traumatism to which the kidney surface has been submitted produces promptly a considerable amount of exudate and the capsule which appears so rapidly is largely composed of fibrin. But this is not all, because if you examine this new capsule formed after 24 hours you find fully formed fibrous tissue scattered through it, and leucocytes in addition. The exuded material has opened up the fibrous tissue of the remaining inner layer after decapsulation, in other words this layer becomes swollen and by van Gieson's method of staining one can demonstrate that this newly formed cap-