

coupled with hereditary taint, even though no albuminuria was present, a pre-albuminic stage might be pronounced. Spasms of the calf muscles of the legs during sleep ; electric shocks experienced by persons falling to sleep, auditory symptoms and itchiness of the skin which singly may mean nothing, combined would lead one to suspect toxic products circulating in the blood.

Dr. C. F. MARTIN drew attention to the absence of albuminuria occasionally where most extensive lesions of the kidneys might be found. This occurred not only in conditions of chronic interstitial nephritis of the ordinary type, and in senile renal changes, but in other conditions as well. He had for some time made examination of the urine of moribund patients at the Royal Victoria Hospital, and subsequently observed the renal changes detected at the autopsies. In a number of instances there had been apparently normal urine as examined carefully in the usual manner, and yet the kidneys had often presented distinct evidence of parenchymatous change, with degeneration of the tubular epithelium and the presence of detritus in the lumina of the tubules. In a large number of cases, too, there was apparently a recent productive change as well, and yet the urine was free from albumen.

Examination of fresh sections under these conditions had showed, too, considerable fatty degeneration of the epithelium, and yet the urine had been normal. A few cases are on record where extensive fatty change and necrosis in the parenchyma had been present with unaltered urine.

Rosenstein has recorded one such instance. These facts would seem to render it all the more probable that the glomerulus is, after all, mainly responsible for the incidence of albuminuria.

That the epithelium is, however, to some extent capable of influencing the presence of albumen may be argued from the theory generally recognized that hyaline casts *i.e.*, an altered form of albumen, seem at times to originate from the epithelial cells of the tubules ; yet in these instances the circulatory system must be undoubtedly altered, too, in order to induce an albuminuria which responds to the usual tests. To say that the so-called physiological albuminuria is really a misnomer, and that the presence of discernible albumen in the urine implies some lesion of the renal structures would seem quite rational on an analogy with the conditions usually found in ordinary parenchymatous nephritis. Under those circumstances it is only local areas of the kidney that are affected, while adjacent parts appear quite normal. In the same way when only a trace of albumen is present, it is more