8. Digestion if accompanied by rest does not exert much influence upon physiological albumin.

Dr. Campbell, in conclusion, said that these investigations were of practical importance, as the discovery of albumin is calculated, unless its significance be understood, to create undue anxiety. With its real meaning understood, and with a microscopic examination, the physician is in a position to reassure his patient and to avoid the errors of unnecessarily energetic measures of relief from dangers which do not exist. The microscope is the only reliable test as to whether or not renal disease does or does not exist.

Dr. J. B. McConnell thought that the subject had been very fully covered by both the papers, and that it was one of the greatest importance from a life insurance point of view. He drew attention to the point that in testing with nitric acid and heat, acid albumin, which is soluble in water, may be formed and lead to an error. He noted that both speakers had rejected the pressure theory, but thought that the fact that albuminuria occurred after violent exercise in athletes and soldiers rendered the theory probable.

cise in athletes and soldiers rendered the theory probable. Dr. J. G. Adami was glad to see, from what had been said by the readers of the papers, how fully it was accepted now-a-days that Heidenhain was right, and that the presence of albumin in the urine must be regarded as due to a disturbance of the secretory mechanism of the glomerular epithelium. And he certainly believed that the main bulk of the escaping albumin passed through the glomeruli; but there were certain cases of extensive and acute congestion of the kidneys, as in acute parenchymatous nephritis, in which there is a most pronounced breaking down of the protoplasm of the convoluted tubules; and with such breaking down he considered that there must be a certain amount of albumin passing into the urine, originating thus from the disintegration of the cells. In the mammary gland the secretion is largely the result of active cellular destruction, and milk is rich in proteids. This breaking up of the cells in the kidney tubules is, as is well known, associated with the development of curious vacuoles, which eventually are to be recognized free in the lumien of the tubules. As to the exact composition of these delicate vacuoles, nothing is known, but certaintly, they can be and are associated with cell destruction and approaching dissolution.

associated with cell destruction and approaching dissolution. Dr. N. D. Gunn referred to several classes of albuminuria of interest to the general practitioner. The albuminuria of pregnancy was of interest because of the liability of serious trouble later on. If the case is seen early enough, the condition can be controlled, but if the patient is allowed to follow her daily avocations, it goes on to uræmia too often. This is really a physiological albuminuria passing off with the birth of the child. The amount of albumin present is no index of the conditions present; it was not the amount of albumin secreted, but the amount of toxic products in the blood not excreted, which did harm.

Another class of cases was that in which there were nervous symptoms, the commonest being occipital headache, and where this was associated with a high tension pulse, a diastolic valvular acticn, coupled with hereditary taint, even though no albuminuria was present, a pre-albuminic stage might be pronounced.

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.

That the epithelium is, however, to some extent capable of influencing the presence of albumin may be argued from the theory generally recognized that