

ine, valerian, the hypnotics, and saline and alkaline laxatives. Bromide of sodium or potassium should be given in doses of fifteen or twenty grains, three times daily, for only a week, and then gradually reduced to one-half dose, once daily; quinine should be given carefully, as it may increase the nervousness. In neurasthenic women with painful backs or hysterical complications, too much cannot be said for electricity, which should be given three or four times weekly, and then suspended. General and spinal galvanization and the static sparks are the especially efficient forms.—*Med. Rec.*

ALBUMINURIA.

The question of the significance of albuminuria must still be regarded as, to a certain extent, *sub judice*. Professor Senator, in the second edition of his work upon albuminuria, has recently reiterated his views that albumen in the urine is, in a certain considerable proportion of cases, physiological in character; while in France the opposite view has been vigorously maintained by Dr. Lecomché and Dr. Telamon. This is one of the cases in which it is particularly desirable to use terms regarding which there can be no ambiguity. If we speak of albuminuria as being "physiological," we should naturally be presumed to mean that the presence of albumen in the urine is a normal occurrence. But we do not apprehend that this is asserted by any competent authority. The most that has been urged on this side of the controversy is that in a considerable proportion of persons, varying from 20 to 25 per 100, apparently in perfect health, albumen may be found in the urine, if sufficiently exact tests be applied. We fail to see how a phenomenon only to be found at the most liberal estimate in one person out of four or five can be correctly designated as "physiological." On the other hand, if we employ the term "functional albuminuria," we merely imply that albumen may be present in the urine without such organic changes in the kidney as can be detected, and this position is now, we conceive, almost universally admitted. The real point at issue—and the controversy, so far from being a verbal one, is really of the most vital pathological interest and importance—is whether the renal epithelium, when structurally sound and functionally efficient, ever allows the transmission of albumen. Two examples will render the real point at issue more readily apprehensible. It is admitted that minute quantities of sugar can be found in the urine without pathological significance. The question is whether "functional" albuminuria is to be placed in the same category as this, or whether it is rather analogous to those changes in the gastric secretions which accompany some forms of dyspepsia,

but which pass off without structural change in the stomach or obvious impairment of health.

Senator believes that the aqueous constituents of the urine are the result of filtration and not of secretion. He attributes to the endothelial cells of the glomeruli a physical rather than a physiological function, and compares their action to that of the endothelium of serous membranes, which, under the influence of the blood pressure, permit the transudation of serum containing a certain proportion of albumen. To this contention Lecomché and Telamon reply that if the urine is a simple transudation we should expect to find it, like the serous effusions, uniformly and obviously albuminous. They share the view of Heidenhain that the glomerular epithelium exercises a selective action and opposes the transudation of albumen. If this be admitted to be its function, it would obviously follow that albuminuria can never be a normal phenomenon. Senator recurs to the analogy of sugar in the urine, and argues that, just as more exact methods of examination have shown the presence of sugar where it was not previously suspected, and in persons in good health, so the same methods show the presence of albumen under similar circumstances; and that, if we regard all albuminuric patients as potential subjects of Bright's disease, so ought we to regard all glycosuric patients as potential diabetics. Argument from analogy is usually hazardous, and rarely convinces an opponent. In order that Senator's position should be maintained it would be necessary to show that the amount of albumen in the urine bears some proportion to the amount of albumen in the blood, just as the amount of sugar in the urine undoubtedly bears some proportion to the amount of sugar in the blood. But this position does not seem to be maintained by anyone, and is, indeed, obviously untenable. It would, further, be necessary to show that it is possible to have abundant albuminuria without structural change in the kidneys, since there is no question that abundant glycosuria may coexist with integrity of those organs; but this is unproved and extremely improbable. On the whole, we are disposed to doubt whether any useful analogies can be drawn between albuminuria and glycosuria. The pathology of the latter affection is extremely obscure, but it is certain that the kidneys are not the organs primarily at fault.

Senator attaches great weight to the admitted fact that a considerable proportion of persons have albumen in the urine without any other sign of impaired health. But to infer from this that the albuminuria is "physiological" is to go beyond the facts. The patient may suffer from excessive secretion from the nostrils, or from too free perspirations, or from slight habitual looseness of the bowels, without obvious impairment of health, but we should not, therefore, be justified in designat-