

10. Consequently, there are three classes of albuminuria, viz.: *a.* dyscrasic albuminuria (caused by excess of presence of the albuminoid constituents of the blood or by alterations occurring in them); *b.* mechanical albuminuria; *c.* albuminuria produced by irritation, *i.e.*, by some local histological cause existing in the kidney. This species is caused by the irritating effect of all the agents that penetrate into the kidney, either from without or that are formed in the organism.

These three classes of albuminuria are closely related to different anatomical conditions of the kidney. If each one of these three conditions have been only transitory, the anatomical

structure of the kidney may remain in its normal condition and no albuminous filtration will take place (as in series *a.*). In other cases, it may be modified by a transitory morbid process, and then regain its previous normal condition. Finally, if the pathological condition that has given rise to albuminuria be persistent, the anatomical structure of the kidney undergoes a gradual change, and causes a particular defined lesion which differs according to the cause, and is in relation with each of the three factors which have modified the renal function so as to determine the filtration of the albumen. This will be more clearly shown in the diagram which follows :

DIAGRAM OF CLASSES OF ALBUMINURIA.

Variety of Albuminuria.	Causes.	Condition of Kidney.	Urea in the Blood and in the Urine.
<i>a.</i> Chemical conditions of the blood. Dyscrasic albuminuria.	<p>Presence in the blood of an excess of albumen, owing to the diet.</p> <p>An excess of the albuminoid constituents of the blood, owing to defective combustion.</p> <p>A change in the chemical constitution of the albuminoid bodies which circulate in the blood. This change renders them incapable of being assimilated, etc. (cachexia).</p>	<p>Normal kidney.</p> <p>Irritative hyperæmia, which is more or less intense according to the organ or apparatus whose functions are affected: the cutaneous surface, lung-disease, etc.</p> <p>Fatty degeneration. Amyloid degeneration.</p>	<p>The maximum of urea, sulphates, and phosphates contained in the urine varies according to the individual.</p> <p>Progressive decrease of the urea in the urine, though it is not accumulated in the blood. Want of production.</p> <p><i>Idem</i>, owing to the gravity of the case which causes cachexia.</p>
<i>b.</i> Degree of pressure of the current of the blood. Mechanical albuminuria.	<p>Various neuropathic affections having a direct or indirect effect upon the vaso motor system.</p> <p>Pregnancy: in short, every kind of pressure exercised on the inferior vena cava or the renal veins.</p> <p>Cardiac diseases that have not yet reached the stage of compensation.</p>	<p>More or less transitory renal stasis.</p> <p><i>Idem</i>, but occasionally the stasis becomes permanent, owing to the general conditions of the organism, or to organic causes that produce the lesion.</p> <p>Persistent stasis, cyanosed kidney, cardiac kidney.</p>	<p>Amount of urea almost normal, within the limits of physiological oscillations.</p> <p>Amount of urea not depending on the pregnancy or the organic causes that produce pressure.</p> <p>Amount of urea decreases in proportion as the affection of the heart increases.</p>
<i>c.</i> Histological alterations take place in the kidneys. Irritative albuminuria.	<p>All the irritative processes in the kidneys, from their first stage up to complete nephritis.</p> <p>The albuminous filtration is more or less considerable in proportion to the rôle and effect that the inflamed elements may have in the mechanism of the urinary filtration.</p>	<p>All the anatomical consequences of inflammation beginning at the first stage, and the degeneration of the different kinds of epithelium up to renal sclerosis and atrophy.</p> <p>This depends on the special histological seat of the inflammation and its particular course.</p>	<p>Amount of urea is normal or slightly increased, owing to the fever (acute stage).</p> <p>Decrease in the production of urea, though there is no increase in the blood, owing to general disturbances in the combustion.</p> <p>Decrease in the production of urea, owing to defective filtration, and consequently accumulation in the blood.</p>