

Nor must we neglect in any case the deleterious effect of a diet excessive in quantity or unwholesome in quality, particularly an undue amount of proteid materials which the organism may be unable to assimilate and transform into normal excrementitious material as urea, adding its burden to the system.

It has been shown, too, that during chronic toxemias there is a progressive lessening of the bactericidal power of the blood-serum, predisposing the organism to attacks by the pathogenic bacteria as seen in the terminal infections.

The mere statement of these facts is sufficient to show the important role auto-intoxication plays in the etiology and symptomatology of disease. Defects in excretion of toxic products is the most important factor in the diseases of the adult, as defects of nutrition are the most important in the young, if we except the specific fevers.

The great importance of auto-intoxication will probably be better understood by a brief reference to some of the diseases in which it is especially operative.

First among these may be mentioned the various forms of Bright's disease, in which, on account of excessive formation, or deficient excretory activity of the kidneys, the poisonous products of proteid metabolism are retained in the system. As the result of his experimental researches, Bouchard has found evidence of seven different toxic substances in the urine. These are :

1. A diuretic substance corresponding to urea. Being a natural diuretic, this substance ensures its own elimination, consequently it does not accumulate in the system in quantity sufficient to produce symptoms.
2. A narcotic substance with properties not unlike those of opium, which may produce coma.
3. A sialogenous substance.
4. Two convulsant substances, which, like strychnia, may produce convulsions.
5. A substance causing contraction of the pupils ; and (6) a substance which reduces animal heat.

As these substances are not formed or excreted in definite proportions in all instances the symptoms in a given case of uremia will depend upon the relative proportion in which the various toxic materials are retained, thus explaining the different clinical pictures in these cases. For example, if the narcotic substance is retained in excess we get uremic coma, if the convulsant substances are in excess we get convulsions as the most marked clinical feature of the case.

Secondly, auto-intoxication of hepatic origin. We notice this in (*a*) the various conditions associated with jaundice, wherein the slowness of the pulse, the mental hebetude, the muscular weakness, the pruritis, the tendency to hemorrhages, etc., give evidence