

it sometimes bothers him yet. He himself declares that he is very much improved, and remarks that he can now walk fairly rapidly without much breathlessness. I will get him to pass some urine and will test it in your presence. The specimen of urine now before you was just passed by the patient, and its sp. gr. is 1025. Its color is not so deep as the specimen he gave us some weeks ago. I have now boiled the urine, and added two or three drops of nitric acid. As you perceive, the amount of albumen has much diminished, there not being now more than 10 per cent. Altogether the case so far, is a most satisfactory one. I look upon it as a case of chronic Bright's disease. The causes of this disease are :

1. Succeeding acute attack. 2. Constant exposure to cold. Wet and sudden changes of temperature. 3. Abuse of alcohol, especially spirits. 4. Constitutional diathesis: (1, gouty; 2, syphilitic; 3, tubercular.) 5. Pregnancy—about 5th to 7th month of utero-gestation. It is met with more in males on account of their exposure.

*Symptoms.*—Frequent micturition, especially at night, dropsical accumulations, liable to disappear and return, skin deficient in action, dry, rough and harsh, is pale or sallow, shortness of breath. Uneasiness over region of kidney. A headache and dizziness, and serious uremic symptoms may occur at any moment. Derangement of digestion, accompanied with flatulence and constipation, with alternating diarrhoea. There is often gradual loss of sight, and ophthalmological examination of eye shows an albuminuric retinitis and hæmorrhage.

In this disease we meet with several varieties of pathological changes in the kidney :

#### 1. LARGE, WHITE, SMOOTH KIDNEY.

This is met with in cases following an acute attack, or it may come on gradually from taking cold. The organs are large and pale with smooth surfaces. In this variety urine generally deficient, pale, turbid, sometimes smoky—sp. gr. either normal or rather high; contains albumen and various casts, the chief casts being epithelial and granular. Anasarca is a prominent symptom, and effusion into serous cavities. General surface, especially face, is dull, white, puffy, pasty, smooth and glossy.

#### 2. GRANULAR, CONTRACTED OR CIRRHOTIC KIDNEY.

The onset of this form is very chronic and insidious. It is chiefly associated with gout and chronic alcoholism, and in persons well up in years.

The kidney is contracted and atrophied, sometimes only weighs an ounce or two; granulations on the surface. The urine generally abundant, at times very copious, color light, sp. gr. low, amount of albumen slight, sometimes none at all; casts are few, and are generally what are termed hyaline or waxy and granular. Towards the close the urine is scanty, at times suppressed. Generally dropsy is absent; if present is slight; skin is harsh and dry, but not pale, puffy or pasty; face sometimes pinched. There is also marked debility.

#### 3. FATTY KIDNEY.

The kidney is the seat of fatty infiltration, while fatty changes are at the same time going on in other portions of the body—notably the liver. Under the microscope fatty casts are seen.

#### 4. LARDACEOUS OR ALBUMINOID KIDNEY.

Kidneys generally enlarged, surface smooth, consistence tough and hard. There is evidence of previous deposit of albuminoid material in other organs; the kidney only as a rule being secondarily affected. At first urine is very copious, pale, no sediment; low sp. gr., 1005 to 1012. Albumen at first either absent or present in small quantity. Later the albumen becomes abundant and the urine diminishes, and its sp. gr. increases considerably. General dropsy is a prominent symptom. Most cases terminate fatally. Lasts from 6 months to a year and a half; very often some intercurrent disease cuts them off, such as pneumonia, pericarditis and œdema of the glottis.

*Treatment.*—The therapeutical indications relate to the dropsy and the prevention of uremia. If dropsy is slight saline cathartics, as sulphate of magnesia or sulphate of soda or citrate of magnesia; if effusion of fluid is large what are called hydrogogue cathartics are necessary—as elaterium in  $\frac{1}{16}$  to  $\frac{1}{4}$  of a grain, every hour till it acts. It should then be at once stopped to prevent vomiting. Gamboge or compound jalap powder, either alone or combined with pot. bitart or 5 to 10 gr. of calomel. Diuretics are not very reliable. Of this class, give pot. bitart., in doses not large enough to purge or potas. acet. with the infusion of digitalis. Infusion of Parsley root said to be very good. An infusion of digitalis  $\mathfrak{z}j$  in  $\mathfrak{z}xx$  of aqua and applied on spongio-pilira over the kidneys is useful. Digitalis leaves in a linseed poultice also over kidneys.

A liniment of digitalis, iodine and squills, rubbed over the loins and legs often increases the urine enormously. It is apt, however, to produce