

and impairment of its function—a strong inference. And that with prolonged, perverted nutrition we may have degenerative changes in the walls of the bloodvessels and in the renal epithelium. Of course we do not forget the prime cause is the pregnancy—the presence of a vascular and rapidly growing tumor within the uterine walls—the removal of which by nature or by art in a very short time brings about a return of the normal condition of the renal capillaries, and a normal condition of the urine. With the cause removed, rest in bed and easily assimilated diet, health usually returns.

The pressure of this vascular tumor is by some assigned as the prime, if not the only cause, in the production of the renal disturbance, incident to the puerperal condition; and the fact that it occurs more frequently in first pregnancies, and does not usually show symptoms until the fourth or fifth month, may lend support to that position.

But in ovarian tumors of rapid growth, we very seldom find albumen in the urine, even in those who have never borne children. As far as mere pressure itself is concerned I hold there is just the same cause for albuminuria in the one as in the other. In the one case, we have an elastic tumor, expanding in every direction, producing great tension of the abdominal walls, pressing upon all the organs, interfering largely with the functions of digestion and respiration, and producing marked anæmia, and yet we find no albumen in the urine.

In the other case we have a vascular and living tumor floating around in a fluid, which produces distension and development of the walls of that which encloses the whole. Both in the walls of the tumor, and in the contents there are wonderfully and rapidly developed nutritive activities. There is rapid building and there is rapid waste production. While outside and beyond the immediate sphere of action there are also augmented activities; and throughout the whole organism, seen and unseen changes are going on.

Here we have pressure as in the other; but oftentimes we have pressure, plus the blood loaded with excrementitious matter, contributing to rise of blood pressure, owing to impeded capillary circulation, and thus to renal hyper-

æmia, and albuminuria, with more or less damage to the structure of the bloodvessels and other tissues of the kidney.

To my mind it is conclusive why we have albuminuria in the one case, and not in the other, and that the more important factor is not pressure. Then the fact that puerperal albuminuria not infrequently occurs in the early stages of pregnancy, before the uterus is sufficiently large to account for albumen on the ground of mere pressure; and also the fact that death of the fœtus in utero has been followed by disappearance of albumen in the urine, in some cases of puerperal albuminuria, strongly assail the idea that the main factor in the production of puerperal albuminuria is pressure—is strongly conclusive that there is a more subtle, more important, and more potent factor than pressure.

While puerperal albuminuria in many cases may continue until the end of the full period of utero-gestation, without producing any very alarming symptoms, still one must admit that there is occasion for anxiety, and that one feels greatly relieved when the uterus empties itself, and all apprehensions are quieted.

Aside from the danger to the mother, there is frequently death of the fœtus in utero. Numbers of cases are recorded in connection with kidney diseases, where miscarriage after miscarriage has taken place, at various periods of utero-gestation from ten weeks to seven months. Doubtless, many cases of habitual abortion, before this recognition, have been attributed to latent syphilis. Upon close examination many of those cases of habitual abortion might have been attributed to toxic hæmia, resulting from impaired kidneys. I have a patient at this present time who miscarried in January and in May of this year. She lives some forty miles from London, and I did not see her at the time of the first miscarriage; but she said at three months she had swelling of the ankles, and more or less puffiness of the face. She attending some convivial gathering in December, walked home, at a late hour, on a cold winter's night, some five or six blocks, and miscarried in two or three weeks after. She attributed her miscarriage to over-exertion, which was very naturally coincided by her attendant physician.