

with increased accentuation of the second aortic sound. This led him to examine the urine. He found there sometimes slight traces of albumen, at other times albumen was entirely absent, but the urine was always of low specific gravity. During the last few months she suffered intensely from agonizing paroxysms of shortness of breath. They would seize her in bed, the face become pallid, the limbs cold, yet notwithstanding this the pulse was one of high arterial tension. Examining the lungs during these paroxysms, breathing sounds were at first normal, later on some few râles might be heard, but at no time sufficient to account for the dyspnoea. One naturally inquired what could be the cause of the dyspnoea. He thought it must be due to a spasmodic condition of the pulmonary vessels, and this spasm was an indication of the condition of the vessels throughout the rest of the body. The spasm must be the result of some poison circulating in the blood. Already medical men were discussing the nature of this poison. Bright, when treating of kidney disease spoke of the enlargement of the heart which was present in many cases. Some few years later Dr. George Johnson, of King's College, wrote a very interesting article upon this condition of thickening of the coats of the vessels in kidney disease, and described it as one of hypertrophy of the muscular coat. He thought the hypertrophy was due to the thickening of the capillaries which supplied nourishment to the body. Then came the demonstrations of Brown-Sequard and Claude Bernard. Johnson afterwards recanted his opinion as to the hypertrophy being due to obstruction in the capillaries; he then thought it to be due to a spasmodic condition of the muscles of the blood vessels, which contracted with a view to prevent impure blood from passing into the tissues. Now, this latter theory would account, Dr. Wilkins believed, for the conditions present in his patient. That there was a spasm there could be no doubt, but the cause of the spasm might be a question—whether it was a reflex or a contraction induced by the direct contact of an irritant upon the muscles of the vessels, was a subject still under dispute. Most authorities at the present day were inclined to believe that the blood itself acted directly upon the muscular substance of the coats of the arteries, and in that way prevented the passage through of the blood containing poison. Gaskell wrote an article upon the influence of irritants upon the muscular substance of the vessels and the heart; and he said that it was not necessary for the nervous system to be connected with the muscles in order to produce rhythmical contraction of the coats. An apparent objection to this theory was the fact that one would sometimes see spasms of the muscular coat producing epileptiform convulsions in one person and in another some different con-

dition; and again, if these irritating materials were all the time circulating, why were not the spasms continual? That was explained by the fact that in the body are found poisons of directly antagonizing effects. A couple of years ago a murder trial had taken place in New York, in which some expert demonstrated the presence of morphia salts in the blood or stomach, and Dr. Vaughan, of Ann Harbor, was able to prove in court that substances could be obtained from the body having the same action as that of morphia, and that it was impossible to distinguish between the reactions of some of these poisons derived from the body and those of morphia. Some recent observers mentioned that poisons of an irritating nature could be obtained from the urine, which poisons were capable of producing tonic seizures. They said even that morning urine would give poisons differing from those of the urine of the evening. Considering all this, it did not take much to make one believe the possibility of poisons existing in the body which were able to produce a narcotic action at one time and at another time a spasmodic action, or at one time the coma of kidney disease and at another the spasms of such conditions as were under discussion. In the vegetable kingdom the poppy produced medicines which were narcotic, and also medicines which were tetanic in their effects. It therefore required but little stretch of the imagination to believe that the blood contained materials which at one time might produce tonic spasmodic effects and at another time the opposite condition. For treatment, he believed in cases of kidney trouble the great thing was to lower the tension. Many cases would be found in which all treatment failed to reduce the quantity of albumen in the urine until the arterial tension was lowered, and the moment that was effected the albumen diminished, the pulse improved and recovery supervened. On the other hand, in a case where the tension remained high (somewhat acute cases with large kidneys), even though the albumen diminished, the course was likely to be towards chronic Bright's disease.

Dr. MILLS said that Dr. Lafleur and Dr. Finley in their remarks had apparently assumed that the condition of the arteries in the lungs might be the same as in other parts of the body. A recent discovery in physiology was of prime importance to the subject under discussion—that is, that the vessels of the lungs were innervated like the systemic arterioles. This discovery explained why the right heart was invariably found full and distended in asphyxia, while the left was empty and contracted. If contraction of the pulmonary arterioles was assumed, it was easily understood why these phenomena occurred. Dr. Mills thought that the present views held with regard to the nature of blood pressure were far too