whereas the very opposite to this is the generally admitted fact. Hæmorrhage to any extent short of causing exhaustion and prostration is, in my experience, and I believe also in the experience of most observers, rather salutary than otherwise, tending to relieve the patient, and to render the disease more chronic, both by removing local congestion and inflammation, and by separating, to a greater or less extent, diseased or tuberculous blood. Nature in such cases appears to do in her own way internally what the physician often does in his way externally by local depletion. I am far, however, from denying that blood escaping into the lungs in large quantity is, from its mere pressure and the obstruction which it occasions, a frequent source of distress to the patient, and of temporary aggravation of disease. I am merely maintaining that it is not an original source of phthisis; and that, when it happens in the progress of consumption, it is not a new focus for the development of tubercle.

[To be continued.]

CASE OF POISONING BY CHLORAL HYDRATE.

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THIS being the first reported case (so far as we are aware) of poisoning by chloral, we have thought it our duty to place on record the observations which we have made, and all the facts we have been able to ascertain.

A clergyman, aged 51, single, of sanguine temperament, and subject to dyspepsia, commenced taking chloral at night on November 15th, 1870; the dose at first being twenty grains, combined with twenty grains of bromide of potassium. This dose was gradually increased, but to what extent, and how rapidly, is uncertain; and the bromide was omitted. He at first had the prescription (which had been sent to him by a relative) dispensed by a chemist, but afterwards procured from him the chloral alone in ounce-bottles. The chemist, Mr. Tite, thinking that he was taking larger doses than were safe, cautioned him as to the use of it, and showed him an article in the *Pharmaceutical Journal* describing the ill effects of an overdose, loss of power in the lower extremities being the most prominent one. He informed Mr. Tite that on one occasion, after taking three doses in one night, he had felt that effect in the morning, having fallen down twice on getting out of bed. Mr. Tite estimated that on that occasion he had taken seventy-five grains. He subsequently procured a copy of that number of the journal, and in it there happened to be an advertisement of hydrate of chloral from a wholesale house. This, it would seem, induced him to obtain from that firm a box containing sixteen ounce-bottles of hydrate of chloral, half of which he had expressed his intention of sending to his relation.

On Friday, January 27th, he was found by his housekeeper, at half-past 8 A.M., dead in bed, the left arm being placed over the top of the head. When Mr. Hunt saw him, about 9 A.M., the face was perfectly calm and pale, covered with profuse perspiration, the clothes in good order, and no appearance of any struggle or vomiting. The body was still warm, with the exception of the exposed parts of the face and the left arm. The housekeeper had often seen him dissolving the chloral in water, in a half-pint bottle (labelled "Chloral Hydrate, 1870"), from which he was in the habit of taking a wineglassful at bedtime; but she did not know the quantity of chloral dissolved each time. She had seen him take a dose from the bottle the night before his death. On January 17th, he had purchased from Mr. Tite an ounce of chloral; and the supply from London had arrived subsequently to that date. After his death, fifteen of the bottles were found full, and one empty; about two ounces of the solution remaining in the bottle above mentioned, on the table in his bedroom. From this we conclude that, in the ten days between the 17th and 27th of January, he had taken fourteen drachms of chloral—presuming that the solution in the bottle contained an ounce to the half-pint. If, however, it contained half an ounce only, the bottle must have been four times filled; and he had, therefore, taken fifteen drachms in the ten days. He was constantly in the habit of "doctoring himself," and, among other things, frequently took carbonate of soda, as much as eighty grains at one dose—purchasing it from Mr. Tite by the half-pound. His housekeeper was not aware whether he had taken any on the night before his death; and we are, therefore, unable to ascertain whether any decomposition of the chloral had taken place.

EXAMINATION OF THE BODY, fifty-four hours after death.—The body was well nourished and fat. There was no decomposition. The heart was perfectly natural in size and appearance, covered with fat

about the auricles and on the ventricular septum. On the left ventricle anteriorly, there was a white patch in the investing membrane, about the size of a thumb-nail, perfectly smooth. There were no adhesions. The heart, which was carefully examined, was in all other respects perfectly natural. The lungs and pleural cavity were quite healthy. The liver and gall-bladder were also healthy. The stomach was large and distended; its pyloric extremity was of uniformly pink hue, anteriorly and posteriorly; there was increased vascularity about the cardiac extremity and along the lesser curvature, with minute extravasated patches of blood (claret-coloured) under the mucous membrane at the cardiac extremity. No thickening or ulceration of the mucous membrane was found. The pylorus was healthy. The large and small intestines were quite natural. The stomach contained about three-quarters of a pint of thick fluid, about the consistency of gruel, with very small pieces of fat and red muscular fibre partly digested. The kidneys were perfectly healthy, and surrounded by much fat. The bladder contained about half a pint of urine. The cerebral membranes were adherent to a small extent on each side of the superior longitudinal sinus, with some old deposits of fibrine slightly puckered in appearance. The membranes generally were much congested, and contained about one ounce of red serum. The convolutions of the brain were remarkably large and pale. The substance was pale, and very soft and friable. There was no increased vascularity in any part, except the choroid plexus; no effusion in the ventricles, nor extravasation of blood.

ON THE USE OF THE TURKISH BATH IN ALBUMINURIA.*

By EDWIN MORRIS, M.D., F.R.C.S., etc.

ONE of the principal constituents of the human blood is albumen, which circulates in it in a dissolved state, playing an important part in the nutrition and formation of the human frame. It is of the greatest importance in the physiology of the human system. Albumen, in its free and normal condition, never coagulates; but it readily assumes a solidified form on the application of heat, or the adding to it of the mineral acids. There is a singular peculiarity with regard to albumen, that, when once it has been coagulated, it cannot again be brought, by any chemical process, to its original dissolved condition. It is true, acetic acid will in some degree dissolve it, and potash completely so; but the albumen so treated will have lost its principal physical features by which it is easily recognised; viz., the solidifying on the application of heat or on the addition of acids. According to the celebrated chemist Lecanu, the relative quantity of albumen in 1000 parts of blood is about 80. M. Denis, in his *Essai sur l'Application de la Chimie à l'Etude Physiologique du Sang de l'Homme*, states that albumen constitutes the greater part of an entire blood-globule. It is only right that I should add that several eminent physiologists doubt the correctness of this statement. It is, however, sufficient for us to know that it is an essential element in the human blood, and that its escape from the system by the urine is indicative of structural disease, or dependent on temporary congestion of some important viscera, and is generally followed by most disastrous consequences. The term "albuminuria" was proposed by the late Dr. Bright, when he first drew attention to the subject in 1827, and has been generally adopted by pathologists ever since.

It is not my intention to point out to you in this paper under what conditions of the system albuminuria occurs, or from what cause it originates, as many modern writers have thrown so much light upon this interesting subject that the profession generally are well acquainted with it. But I will confine myself to the treatment of that form of it which depends upon a peculiar disorganisation of the kidneys, called Bright's kidney, or sometimes Bright's disease, where the albumen becomes greatly diminished in the system, apparently by the abundant dropsy, and not by the actual loss through the kidneys.

In Bright's kidney, the gland is generally mottled or speckled with uneven projections; and, in the advanced stages, is contracted in bulk and hard. The chief seat of disorganisation is in its outer or cortical portion; the tubular parts of the gland are almost entirely absorbed; in fact, the internal structure of the kidneys becomes broken up, and incapable of performing the normal functions. We must, therefore, take into our consideration two points which specially merit our attention—the albuminous condition of the urine, and the disorganised state of the kidneys.

Albumen is the great agent in nutrition, and is not an excrementitious

* Read before the Midland Branch.