of the fibrine of a mass of blood, or the liquor sanguinis which sometimes floats at its surface.

When Liebig wrote the Organic Chemistry of Physiology, &c., he could not be aware of the great importance which late researches have attached to the colourless-blood-cells, in the process of nutrition or secretion. The question which these researches have raised is whether the plastic element of the blood (fibrine, albumen, and molecules) is mixed and incorporated with the saline and fluid element during the circulation through the living vessels, or whether the chief of these elements at least, are not, during their circulation as constituents of the blood, enclosed within the colourless-cells,—that is, whether in the normal process of transformation and nutrition the cells burst and mingle their living contents with the fluid of the blood, the mixed materials circulating through the tissues; or whether the cells first adhere to the tissues they are designed to nourish, so that their plastic contents, instead of mingling with the circulating fluid, are appropriated to nutrition and secretion at the point of adhesion.

Upon the former view, the fluid element of the blood would be, as is now supposed, of a very plastic nature, and the materials required for the secretions and the nutrition of the several organs would be drawn out of it by some peculiar selective endowment in the tissues. Upon the latter view, which my researches have led me to adopt, the fluid element of the blood would be a saline, limpid, and variable kind of liquid, of an excrementitious rather than of a nutritive nature; and the nutritive materials, the chief of which I conceive to be living molecules, would be applied to the various tissues by the colourless-cells themselves.

This latter view is supported by all the facts that I have witnessed in the circulation of the frog; and corroborated by an examination of the characters of the blood in inflamed parts, and of the various appearances of the colourless-cells, and their transformed and plastic elements in liquor sanguinis, lymph, mucus, saliva, the tears, and pus.

On viewing the circulation through the capillaries and minute vessels of a frog's foot that has been very carefully handled, the blood-fluid appears to be a thin and limpid liquid. When the foot has been immersed in tepid water or exposed to any other source of irritation, then a plastic element, distinct from the circulating fluid, may be seen; but this element is stationary, lining the interior boundary of the tissues forming the parietes of the vessels, numerous colourless cells are entangled in it, and the nutrition of the part is abnormally or unusually increased.

Hence, therefore, I conclude that the *liquor sanguinis*—the colourless and plastic layer at the surface of buffy blood, is analogous to the stationary, colourless, and plastic layer seen in the irritated vessels of the living frog, and a very different thing from the fluid forming the vehicle by which the cells circulate through the body. The plastic element in the former case is derived from cells engaged in the process of nutrition, and in the other from similar cells which have been ruptured by change of situation. Viewed in this light, the liquor sanguinis of blood withdrawn from the body may be regarded as a compound of the plastic element and molecules from the interior of ruptured colourless-cells, with the water, the saline, and other matters of

the blood-fluid. During coagulation two portions of the plastic element, the fibrine and the molecules, with the unruptured cells, separate and form a fibrous ~~thaw~~ ^{thaw}, while a third portion remains incorporated with, and adds to the amount of the albuminous elements of the blood-fluid, forming the serum; or, to use the chemical language of the day, "The chief constituents of the blood and the caseine of milk may be regarded as compounds of phosphates and other salts, and of sulphur and phosphorus, with a compound of carbon, nitrogen, hydrogen, and oxygen." That is, if I understand the passage rightly, as compounds of the saline and other elements of the blood-fluid, with the elements from the interior of cells.

The preceding considerations have induced me to enter upon a series of experimental researches, to determine the visible effects produced upon recent blood-cells by fresh and warm urine. It would be premature to enter upon the results now, but I may refer those who wish to satisfy themselves of the existence of an interior matter or corrugated interior vesicle in the red-blood-cells, or to see peculiar changes and motions in the cells themselves, to the appearances presented by these objects after contact with fresh urine, as shown by a linear power of from 700 to 900 diameters.

I remain, Sir,

Yours very obediently,

W. ADDISON.

July 20, 1844.

P.S. I cannot forbear remarking upon the *sang froid* with which the writer in the British and Foreign Review treats my molecules. I am almost inclined to imagine that he must have often seen them *in the cells of the human structure*, before the publication of my researches.

CASE OF INTRA-UTERINE TUMOUR.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND SURGICAL JOURNAL.

SIR,

I herewith furnish you with a few brief notes of a very singular case which recently came under my observation, and which I do not find noticed by any of the writers on midwifery whom I have consulted. If you should find them sufficiently interesting, by inserting them in your journal you will much oblige,

Sir,

Your obedient servant,

WILLIAM THOMAS HAMILTON.

Birkenhead, July 12, 1844.

Mary Kaye, aged 44, married eighteen years, the mother of six children; eight years since her last pregnancy; states that her general health has always been good, catamenia regular; has for many years been subject to prolapsus uteri. About two years ago she perceived that the uterus, which had been down for some time previously, and which gave her the impression of being dotted over with numerous small excrescences like warts, began to recover its natural position, when she imagined she was again becoming pregnant. She, however, continued to menstruate, and increased in size for about twelve months, at times being much annoyed with bearing-down pains, like those of labour, but never felt any degree of

motion in the womb. After this period these pains ceased, and the tumour, which had assumed the size of the uterus in the fifth month of pregnancy, gave her no other annoyance than from its bulk and weight, till about four months ago, when her health began to fail; she complained of loss of appetite, great prostration of strength, pains in the back and legs, &c., which induced her to seek advice. Some weeks afterwards an extremely offensive discharge, much resembling unhealthy matter, made its appearance, and the labour-pains reappeared, attended with considerable hæmorrhage.

On examination per vaginam, the os uteri was found dilated to the size of half-a-crown, and a large substance presenting, round which the finger could be easily passed as far as it could reach.

As the uterus was endeavouring evidently to rid itself of this large mass, and as the pains were short and ineffectual, with the os uteri sufficiently dilated, an infusion of the ergot of rye was cautiously administered. On the third day of its use a portion of this substance had reached the external parts, which was with some difficulty detached and removed. Another portion followed in three days, and finally the remainder was expelled six days afterwards, unattended by hæmorrhage, or any unfavourable symptom. The uterine discharge immediately ceased; her appetite improved; and she has since been progressing in health and strength.

It now remains for me to endeavour to describe the character of the mass which came away, and which is now in my possession.

The weight is about four pounds, the colour is a dirty white inclining to amber, the surface very even, being in parts lobulated, in others fimbriated or fringed, and the substance, which is of an uniform density, has a fatty appearance, somewhat resembling the fibrous parts of meat that has been well boiled. After a careful examination no trace of membranes; umbilical cord, bone, cartilage, or vessels of nutrition could be discovered. The last portion however that was expelled, though apparently not in the least differing in structure from the other parts, yet reminded me of a placenta, presenting as it did on one side a smooth and shining, and on the other a more uneven and fleshy surface.

This may not be a first-rate description, but in a case of this kind it may readily be supposed that it is not very easy to convey anything like an exact idea of a substance formed under such circumstances. Perhaps I may here be allowed to record the very decided effects which followed the exhibition of the *secale cornutum*. Soon after the first dose had been given, the uterus which had before been in a comparative passive state, began to contract, and the pains continued to increase both in power and frequency during its administration, which consisted of five or six doses each morning, at intervals of fifteen minutes. On withholding the medicine, the uterus again returned to its former state of quiescence, and so remained until it was again called into action by a repetition of the ergot on the following morning.

I mention this as it still remains a question, sub judice, whether the *secale cornutum* will produce its specific effects on an unimpregnated uterus.

CASE OF ACUTE INFLAMMATION OF THE PIA MATER, WITH INFLAMMATION OF THE CEREBRUM—HOMŒOPATHY—DEATH.

The following case of acute cerebral inflammation presents several features of peculiar interest. In its commencement it was altogether neglected, and was subsequently treated homœopathically; it consequently affords an instance of the disease allowed to proceed to its termination without interference, and is well calculated to exemplify its natural progress and termination.

The case was read before the Dublin Pathological Society by Mr. Adams, who was called in to witness the closing scene, and is published in the report of the proceedings of the Society in the last number of the Dublin Journal of Medical Science. The subject of the attack was a young lady, 23 years of age, and the following particulars of its progress and treatment were carefully collected by Mr. Adams, on the spot, partly from the family, and partly from an experienced and intelligent nurse, who for the last five days of the illness had never left the patient's bedside.

I learned, says Mr. Adams, that on the 24th of December the young lady first complained of being unwell and chilly; on this day she had driven to Dublin with her sisters, and on her return home in the evening, took a shivering. On the 25th, Christmas day, she was still complaining and remained in her room, not being able to join the family circle this day at dinner. On Tuesday, the 27th, she was considered better, and was down stairs in the drawing-room, but became very unwell, fainted, and was carried up-stairs to bed nearly insensible. On this day she mentioned to her sisters that she saw objects double. None of these symptoms alarmed the family, or induced them to procure any advice until Wednesday, the 28th of December, when they called in to visit the young lady an eminent professor of homœopathy, who had been occasionally in attendance on the family. He took charge of the case, and from day to day, that is, from Wednesday until the following Monday, pronounced that the case was one of fever, and going on favourably. On this day, however, she had a violent convulsion.

The testimony of the nurse was, that she had not seen the young lady until Friday night, at ten o'clock, the 30th of December. On her arrival she found her very restless, and she passed a very disturbed night. "She would fall into a doze, and awake frightened, and would shrink back in the bed as if she saw something she would avoid; she did not complain of pain now, but her forehead felt very hot, her tongue was white and coated, her pulse used to 'come and go,'—was irregular—her head seemed heavy to her; when she was raised up in bed, her head fell on her shoulder." She was delirious throughout the night. What she said was rather amusing, and would make herself as well as those about her laugh. Upon asking the nurse to particularize what she thought her mind was occupied with, as far as she could judge from her words, she replied: "She seemed to be occupied (mentally) in her Sunday school, teaching children whom she would call by name; she would ask for her dress and her boots, to go out, and inquire why the car was not brought round, but there was much variety in her delirious thoughts; she would begin with a religious hymn, and before it was concluded, she 'gambolled'