race, has hitherto formed a serious obstacle to health and the enjoyment of life. Where the success of the operation is followed by such satisfactory results, some degree of risk may justifiably be incurred on the principle and advice of the father of medicine.

"Ad extremos morbos extrema remedia."

4, Crescent, Salford, August, 1845.

RESEARCHES ON THE COMPOSITION OF THE
BLOOD IN HEALTH AND IN DISEASE: A
MEMOIR PRESENTED TO THE ACADEMIE
DES SCIENCES, PARIS, Nov. 18, 1844.

By A. BECQUEREL, M.D., and A. RODIER, M.D.

(Translated from the *Gazette Médicale de Paris*,
by EDGAR SHEPPARD, Esq., M.R.C.S.)

(Continued from page 470.)

ON THE COMPOSITION OF THE BLOOD IN PARTICULAR
DISEASES.

We can only examine the composition of the blood in a certain number of the diseases which are most commonly met with in practice, since there are many in which blood-letting is never indicated, and has never been prescribed. We shall proceed therefore to demonstrate that by means of the general principles before established, all the special phenomena which present themselves may be explained.

OF THE BLOOD IN TYPHUS FEVER.

Typhus fever may be considered in some measure, as the type of the extensive class of pyrexia. From the great variation which it presents in the nature and intensity of its symptoms, in its progress, and in its duration, it is well calculated for the study of the composition of the blood in these diseases, and of the modifications which the important influences of adynamia and ataxia may exercise on this fluid.

MM. Andral and Gavarret have made numerous analyses on this subject, and have obtained results which may be summed up as follows:—In typhus fever the proportion of the globules is sometimes normal, 0.127; sometimes it becomes increased, and attains the degree which it ordinarily presents in plethora. This latter result they explain by admitting that typhus fever is very frequently developed in plethoric individuals.

The solid materials of the serum do not undergo any remarkable changes in their proportions.

The fibrin is never augmented, except there be a complication with some of the phlegmasia; it frequently remains normal, but frequently also it diminishes in a very extraordinary manner; this is particularly the case when the disease is severe, when it develops an adynamic state, and when there is a tendency to the production of hæmorrhages.

Let us now see what are the results at which we have arrived, and whether they differ from those obtained by these able observers.

We have analysed the blood of thirteen individuals suffering from typhus fever—eleven men and two women. Of the eleven men six were bled once, four twice, and one three times. One of the women was bled once, the other three times, making altogether twenty-one blood-lettings.

The ages of the males were:—one 17, two 18, one

21, one 22, three 23, one 28, one 31, and one 48 years. Their avocations, which it is unnecessary here to mention, were various. None of them had dwelt in Paris from infancy, and the period of their arrival there, with one exception, was not very long previous to the attack of fever. One of them had lived in the metropolis for 8, one for 11, two for 12, four for 18 months; one for 2 years, and one from 7 to 8 years. They were all of good strong constitution.

On entering into details we find that six were strongly made, and of a certain degree of *em'point*; three were a little less strong, and two, although meagre in appearance, were strong also. All had previously enjoyed excellent health. One only, for the last year of his residence in Paris, had been subject to diarrhoea.

The following were the most prominent characters of the disease:—In three cases it was very severe, and two of the patients fell victims to it; in six cases it was of medium severity; in two it was slight. The fever assumed the following forms:—In the three severe cases, the disease presented itself in the adynamic form; in two out of the six of moderate intensity, the form was also adynamic; in the two slight cases it presented the so-called inflammatory type.

We shall examine separately the composition of the blood in the first, the second, and the third blood-lettings.

FIRST BLOOD-LETTINGS MADE IN ELEVEN MEN.

These first blood-lettings indicate the actual composition of the blood in typhus fever. They were made at the following periods of the disease:—Once on the seventh day, four times on the eighth, twice on the ninth, once on the tenth, twice on the twelfth, once on the fourteenth. The subjoined table represents the mean composition in these eleven blood-lettings.

MEAN COMPOSITION OF THE BLOOD IN ELEVEN
CASES OF TYPHUS FEVER.

Density of the blood deprived of its fibrin	1054.4
— of serum	1025.4
Water	797.
Globules	127.4
Albumen	64.8
Fibrin	2.8
Extractive matters and free salts	6.3
Fatty matters.	1.773
Seroline	Variable.
Phosphorated matter	0.471
Cholesterine	0.089
Soap	1.093

IN 1000 GRAMMES OF CALCINED BLOOD.

Chloride of sodium	2.9
Soluble salts	2.5
Phosphates	0.497
Iron	0.555

The examination of this table, and of each case in particular, leads to the following conclusions:—

The globules, in typhus fever, are influenced in the same manner as we have seen them in every severe disease—that is, they experience a very marked diminution in quantity. There are, however, two circum-

Such were the general results of the second blood-lettings. We may now notice some particular facts with regard to the fibrin. In these five second blood-lettings, twice this principle remained the same as it was at the first. Once, in a severe case, the first bleeding yielded 2.3; the second gave exactly the same proportion. Another time, in a case of moderate intensity, the fibrin yielded 2. at the first blood-letting, and 2. also at the second, a number a little less than that of the normal state. In the three other cases the fibrin was notably diminished from what it was at first; one of them was a severe case, and two were of moderate intensity. The following are their numbers :—

Fibrin at	1st blood-letting	1st case.	2nd case.	3rd case.
		2.	3.5	2.7
2nd ditto		1.4	0.8	1.3

We cannot find any circumstance to account for so considerable a decrease as took place in the second case. The disease, although of the adynamic form, was never very severe, and gave rise to no fears for the patient's safety. He had had no hæmorrhage.

Once only in typhus fever an individual was bled three times; the case was of the adynamic form, and the patient fell a victim to it. At the third blood-letting, the water was increased; the globules were diminished; the fibrin had experienced no modification; it was 2.3 at the first, 2.3 at the second, and 2 at the third, blood-letting. The albumen underwent no change; the fatty matters were slightly diminished; there was no seroline in either of the three blood-lettings. The phosphorated matter, greatly diminished at the second, was not increased at the third. The cholesterine increased from the first to the third. There was no appreciable modification in the salts. All three times the phosphates were a little elevated.

We now proceed to give a rapid summary of the results of bleeding in the two women affected with typhus fever :—

The first, aged 23, a servant, of a strong constitution, having lived in Paris for the last five years and a half, presented at the commencement the symptoms of rather a severe inflammatory typhus. She was bled on the fifth and sixth days; afterwards the disease became worse, and assumed the adynamic form. Towards the 18th day there was an increase in the symptoms, and the febrile disturbance especially was greater, rendering necessary blood-letting for the third time. The following was the composition of the blood :—On the first blood-letting, (fifth day,) the blood was the same as in the normal state, (symptoms slight;) no change in the globules, the albumen, the fibrin, the cerebrine, or the animal soap; a singular increase in the quantity of seroline and cholesterine. On the 18th day, (third blood-letting,) the patient being very much enfeebled, there existed all the characteristics of the state termed anæmic; a notable diminution of the globules and of the albumen; a slight decrease also in the fibrin; the fatty matters had returned to the normal state.

The second woman, 28 years of age, had been in Paris for two months, and had always enjoyed good health. The typhus fever was of moderate intensity; she was bled on the eighth day, the blood being found in all respects as in the normal state.

Such was the chemical composition of the circulating fluid in the cases submitted to our analysis. Let us now see if the most prominent physical properties of this fluid, those which, till of late, have alone attracted the attention of medical men, were modified; and if in typhus fever the blood becomes diffuent, and acquires the new qualities which are ordinarily assigned to it.

(To be continued.)

CASE OF PLACENTA PRÆVIA.

By T. M. GREENHOW, Esq., F.R.C.S., Newcastle-upon-Tyne.

(For the *Provincial Medical and Surgical Journal*.)

The subject of placenta prævia has recently claimed so large a share of attention, that practical facts connected with it cannot be entirely without interest.

The profession is certainly greatly indebted to Dr. Simpson, of Edinburgh, for the diligence with which he has collected the record of cases, in which the placenta has preceded the birth of the infant. The table he has constructed must go far to establish the value of the new practical rule in midwifery,—which teaches, not only the safety, but the urgent necessity, in many cases, of detaching and delivering the placenta when the life of the patient can only be preserved by immediately checking the flooding which places it in such imminent hazard. The accompanying case is not the only one in which I have found the complete separation of the placenta from its vascular connexion with the uterus entirely successful in accomplishing this purpose, and in which the labour has afterwards rapidly proceeded to a happy conclusion; but it is somewhat remarkable from the recurrence of the same preternatural circumstances in successive confinements.

Mrs. L., aged 44, married at 18, has had thirteen children, all, except the first, born at seven months; three only are living. Except the first, nearly all were preternatural presentations, many of them placental, when profuse hæmorrhage took place, demanding immediate delivery by turning.

In February, 1844, the placenta was found considerably separated, the breech presenting behind it, the discharge excessive, and the patient much exhausted. By introducing the finger within the os uteri, and making a circular movement, the placenta was altogether detached from its connexion with the uterus, and withdrawn; the hips of the foetus soon followed, and delivery was rapidly completed. No further hæmorrhage took place, and the patient recovered well, with the exception of an attack of phlegmasia dolens, which yielded to appropriate treatment.

On the 13th of May, 1845, when in the sixth month of pregnancy, hæmorrhage to some extent took place, attended with shivering and sickness; a recurrence of the same symptoms at uncertain intervals, until the completion of the seventh month, with, on one or two occasions, great discharge of florid blood.

July 1st. Labour pains came on, with much hæmorrhage; the placenta was found separated to a considerable extent, and protruding at the os externum. The finger was introduced, as on the former occasion, and the connexion of the placenta with the uterus completely destroyed, when all hazard of further discharge was effectually prevented. The head was found at the brim of the pelvis, accompanied by a hand of