lowest 99; and they often varied between 120 and 100, approaching the latter number oftener than the former. The blood of persons, then, whose lungs are beginning to be tuberculous, offers that particular modification which belongs to feeble constitutions; they are truly in a state of commencing anæmia, and their blood is like that of patients who have been bled several times.* This association is not, however, one of that indispensable kind which we regard as cause and effect, but full of meaning in respect to the "choice and application of modes of treatment."

Finally, respecting many morbid associations, it is impossible to offer anything satisfactory, because the obscurity which prevails as to the nature of many diseases implies that we have no positive information in what manner their components are associated or combined. Through what chain of derangement the extrinsic causes of disease operate in bringing about the malignant diseases, it is not possible to say precisely, for though these affections are mostly united with low states of vitality and imperfect states of nutrition, and with anæmic conditions of the blood, yet all these morbid elements may exist separately, without being necessarily accompanied with the establishment of such disorders. The same applies to the formation of cysts, hydatids, and the production of parasitical growths, which are observed to attend low states of the system, although the precise conditions necessary for their evolution are yet not properly understood. It is acknowledged that the common external influences of cold and moisture, and other ordinary agencies, in the production of disease, are, in themselves, insufficient to bring about such derangements; and it, therefore, remains for us still more attentively to analyze the morbid conditions which compose the malignant diseases, and observe the associations which connect them into a common whole.

In the next paper, I shall pass on to a brief consideration of the subject of the *co-existence* of morbid conditions; here concluding what I have to say on the *association* of morbid action: not that I have by any means exhausted the subject, but it would be tedious, if indeed it were possible, to anticipate all the modes in which the processes of disease may be connected. Sufficient may have been said to show the importance of the subject, and to indicate in what manner the mind should be directed to the observation of the relations of the more elementary forms of disease. It then only remains to apply the same system of inquiry to any new series of combinations which may present themselves.

We see that, independently of what are called *extrinsic* causes of disease, the morbid changes, thereby produced, may create further derangement by their *alliance with each other*.

Broughton, near Manchester.

EXPULSION OF THE OVUM, ENTIRE, AT THE FULL PERIOD OF GESTATION.

By W. SYMONDS ROOTES, Esq. M.D. Ed., &c. Ross, Herefordshire.

THIS morning, October 10th, at eight A.M., I was requested to attend M. S.—, the wife of a shoemaker of this town, in labour. Visited her at ten; at eleven, the waters broke, and she went to bed; on examination, found the head of the child presenting naturally; it had cleared the brim of the pelvis, and at half-past eleven the child was born in one pain, no arrest or delay occurring. After detaching the child, and before I had time to place my hand on the patient's abdomen, my attention was attracted by a very strong pain—attracted to it by the nurse and the movement of the patient, for throughout the whole of her labour she never gave utterance to a single cry or even moan. Thinking the placenta was coming away, I introduced a finger into the vagina by the side of the funis, and found the head of another child presenting very low down; by its side, partially over it, and likewise protruding through the vagina, was a large bag of the membranes distended with water. This I tried to rupture, but at the same moment a strong pain came on, and the second child was born, enveloped in the unbroken membranes, containing the liquor amnii, and with the placenta attached; the placenta of the first child, to the margin of which the second placenta was adherent, being all that remained in the vagina. I lifted up the bedclothes, and showed the nurse this, to me, unique and beautiful sight; we distinctly saw the child, through the transparent membranes, moving, as also the cord, which was coiled round its neck, and the divisions of the latter where it joined the placenta. I lost no time, however, in gazing on it, but proceeded to rupture the membranes, and liberate the child's neck from the

pressure of the cord, and I then detached it. Placing my hand on the abdomen I found the uterus well contracted down into the pelvis. The placenta were then removed. The woman had previously given birth to eleven children, she is 41 years of age; has a very roomy pelvis, but says all her children have been born small. The twins are somewhat less than the average bulk and size, but not much; both cried lustily, and kicked vigorously at birth; they take their food well and, in short, are likely to thrive. The first born and the smallest of the two is a boy; the other, and larger, a girl.

October 15th.—Mother and children both doing well.

CASE OF PLEURO-PERIPNEUMONIA.

By JAMES K. DOW, Esq., Surgeon, Downham-road, Islington

ON the 8th May, at ten P.M., a friend of mine, a medical student, called and requested me to accompany him to see, and to take upon myself the responsibility of, the following case, to which he a few hours previously had been called, and for which he had prescribed.

Elizabeth F.—, single woman, aged twenty-one, a shawl and parasol-fringer, went to her place of work that morning in her usual state of apparently good health: about 2 P.M., while at work, she was suddenly seized with severe pain in her right side, and was forthwith brought home in a cab.

I found her in bed, lying on the left side; in reply to my questions, she complained of great pain in her right side, and placed her hand upon the space occupied by the sixth, seventh, and eighth ribs as its seat; she said there existed no pain elsewhere, and certainly there was no other place that exhibited tenderness on pressure. On watching the respiratory action, it was so short and hurried, as to convey the impression of approaching suffocation; there was no cough. The whole of the face, especially about the lips and beneath the lower eyelids, was remarkably livid in its hue, and so "puffed," as to warrant the conclusion that she had fared the worst in some recent pugilistic encounter. The pulse was frequent, small, quick, occasionally wiry, and intermittent. The tongue was furred, and rather moist. On percussing the chest, there was much dullness in each of the regions; on applying the stethoscope, I at once detected the rhonchus sonorous, sibilans, crepitans; this last, the *râle* crepitant of Laennec was present in a very marked degree. The heart palpitated with great force, and frequency; the *bruit de soufflet*, was also very audible.

While exploring these regions, the turgid state of the mammae, and their enlarged and darkened areolæ, at once evinced a state of far-advanced pregnancy, and led me to look for a corresponding swell, of a hemispherical form, in the umbilical region, and in this I was not disappointed: strange however, neither my patient, nor her relatives around, seemed to have the remotest consciousness, or idea of the existence of this "hidden treasure."

Such were the pathognomic symptoms, and on the strength of those derived from auscultation, especially on the rhonchus crepitans, I decided that this was a case of pleuro-peripneumonia, and that in the stage of congestion, the stage in which curative measures were for the present most urgently and imperatively required. What was indicated? The abstraction of blood until the approach of syncope: from this my friend shrank, and thought that with such a weak pulse she could not bear bleeding. In these cases this is the usual objection urged by young practitioners who have not availed themselves of the benefits of auscultation, and as it is a most erroneous one as this and numberless other cases prove, I allude to it that it may be the more exposed, and more guarded against. After a little coaxing, and some force, I was allowed to open a vein, and abstracted about 12 ounces of blood: consequent upon this loss, the pleuritic pain considerably abated, the dyspnoea was relieved, and the pulse at once became fuller: I moreover ordered that the right side of her chest, over the seat of pain, should be unremittingly fomented; that she should be allowed but a little gruel and barley-water; and prescribed the following medicines:—

R. Sulphate of magnesia, 1 ounce; tartarized antimony, 1½ grain; ipecacuanha wine, 1½ drachm; tincture of digitalis, 1 drachm; distilled water, 6 ounces; for a mixture, 1 ounce to be taken every three hours. R. Calomel, 12 grains; opium, 3 grains; extract of hyoscyamus, 15 grains; for eight pills, one every second hour.

9th. 9, A.M.—On inquiry I found that the interval had been

* Essay on the Blood in Disease. Translated by Meigs and Stillé, 1844.