portunately augmented, and this must lead to the numerical increase as well as to the high percentage of hæmoglobin, until a balance is struck between the production and the destruction of the blood-corpuscles."

EARLY DELIRIUM IN TYPHOID.

ASCHAFFENBOURG (*Archives de Neurologie*, March, 1895) reports the case of a female, aged thirty years, who entered the hospital in a state of great agitation, with disordered ideas of a very marked character, so that she was incapable of understanding what was said to her. She had insomnia, hallucinations, and walked as if drunk. The pulse was rapid.

The hallucinations, as well as the agitation and the intellectual obtuseness, became more and more marked, and reached their height about the fifth day. At this time, the evening temperature being 38.4° C., typhoid fever was suspected, and the symptoms soon became typical. The delirium disappeared, but the patient gradually sank and died in collapse. The autopsy confirmed the diagnosis.

Out of seventeen cases of early delirium in typhoid in the literature, in seven the delirium preceded the fever—the latest period at which it was observed being the end of the first week, the delirium lasting, as a rule, only a few days. Six patients of the seventeen reported died. Early delirium in typhoid presents itself under two forms, both of which have as a common symptom great intellectual obtuseness.

In the one form we have delirium similar to that seen in the later stages of the disease. The patients imagine that they are being electrified, etc.; they are restless and at times violent, or perhaps may be in a condition of torpor. Very often there is a primary stage of agitation followed by a stage of torpor.

In the second form there is absolute confusion both of the ideas and actions. The patients sing, pray, or dance, and may be either gay or depressed. As to causation, Aschaffenburg inclines to the view that the typhoid bacilli secrete a poison which has the power of diminishing the body-heat and exciting the cerebral cortex like a narcotic alkaloid.

HÆMOGLOBINURIA FROM MUSCULAR EXERTION.

LEE DICKINSON (*Clinical Society's Transactions*, 1894) reports three interesting cases of hæmoglobinuria from exertion. All of the cases occurred in young, healthy individuals after severe exertion, the hæmoglobinuria being transitory and unaccompanied by any other symptoms, except in one case where there was slight frequency of micturition.

The author points out that there exists a condition which may be called functional hæmoglobinuria, in which there seems to exist an abnormal liability of the blood-corpuscles to destruction, the hæmoglobinuria occurring on very slight exertion.

In his cases, however, the normal blood was destroyed, the hæmoglobinuria here produced being comparable to that occurring in burns and after certain poisons.

A case is mentioned in which, in a boy dying during a run, the only patho-

logical lesion found was a disintegration of the red corpuscles; the author suggests that had the boy lived long enough he would have preselected hæmoglobinuria, and that his cases differed from this only in degree.

The hæmoglobinuria in these cases is explained by the destruction of the red corpuscles in the circulation and the subsequent elimination of the hæmoglobin by the kidneys.

How the blood-disintegration occurs is not fully known, but carbonic acid is probably largely concerned in the process, as it is known that this gas, in excess in the system, may profoundly modify the blood and the tissues associated with it. Cyanosis did not, however, accompany the over-exertion in all the cases.

LEUCOCYTOSIS IN HYPERTROPHIC CIRRHOSIS OF THE LIVER.

In a short note on this point HANOT and MENNIER (*Comptes Rendus de la Société de Biologie*, February 1, 1895) call attention to the fact that they have always regarded this disease as of an infectious nature, and consider the leucocytosis as further evidence of infection.

They cite five cases of hypertrophic cirrhosis with chronic icterus, in each of which blood-counts were made on various occasions, and an excess of leucocytes always found. In none of these cases was there any extra hepatic inflammation which could cause a leucocytosis.

The examinations showed that the number of leucocytes per cubic millimetre varied from 9000 to 21,800; that is to say, an average of 15,000.

The blood-count of a number of cases of alcoholic cirrhosis showed an average of 6600 leucocytes per cubic millimetre.

The authors conclude that hypertrophic cirrhosis is the only disease of the liver in which a leucocytosis is present, except carcinoma, in which they have found as many as 40,000 white corpuscles to the cubic millimetre.

CONFUSION BETWEEN DISTENDED GALL-BLADDER AND MOVABLE KIDNEY.

HENRY MORRIS (*British Medical Journal*, February 2, 1895) points out that though on first thought there is not much resemblance between these two affections, the one is often confounded with the other.

The fact that both affections are much more common in women is noted, and the fact that the right kidney is much more movable than the left increases the chances of error. The symptoms common to both are pointed out.

Both may present as a tumor in the right hypochondriac and umbilical regions, and the physical characteristics of the tumor from either cause may be similar. The tumor may be movable in either case, and in either case the percussion-note overlying it may be resonant or dull. Both diseases may cause dyspeptic symptoms or give rise to colic. Either may cause jaundice, gastric intestinal catarrh, or even peritonitis. In neither case is the condition of the urine a reliable guide. The conditions of the gall-bladder, which tend to render the confusion more probable, are elongation with a reniform outline, mobility, or downward displacement of the liver, with a retroflexed gall-bladder under the viscus, causing the displaced bladder to feel like a loin rather than an abdominal tumor.

A tilting of the kidney from behind forward, bringing its anterior end just under the abdominal parietes, or adhesion of the kidney to the right lobe of the liver might cause the kidney to resemble gall-bladder.

To distinguish between the two conditions it must be remembered that a distended gall-bladder, as well as the kidney, is a frequent cause of movable abdominal tumor. The range of motion in the gall-bladder is, however, always in the arc of a circle, the centre of which is a point beneath the right lobe of the liver. The history of a distinct attack of jaundice is an important factor in diagnosis. A distended gall-bladder can generally be felt, whereas a movable kidney often cannot. The gall-bladder, if distended with stones, is much harder than the kidney.

Variance in size of the tumors is of no importance, unless with the variance in size there is the history of the passage of large quantities of urine.

An attempt should always be made in these cases to pass the hand behind the tumor and palpate the kidney.

DIPHTHERIA ANTITOXIN.

KUNTZEN (*Deutsche medicinische Wochenschrift*, 1894, No. 49), in reporting the results of the use of Behring's antitoxin in diphtheria, emphasizes some things worthy of general attention. In the first place he criticises the custom of classifying cases as "mild," "moderately severe," and "severe," since the prognosis often varies from hour to hour. Behring and his collaborators laid especial stress on the value of the serum in cases treated early; and in the report on 220 cases by Ehrlich, Kossel and Wassermann, the latter classified their cases according to the day of the disease on which the treatment was begun, showing that the death-rate, which was 0 in cases treated on the first day, increased from 3 per cent. on the second to 14, 23, 43.5, etc. If future results are published in this way, the value of the remedy can be more definitely determined. Kuntzen himself treated twenty-five cases and lost only three. Five required tracheotomy, and of these, two died. Kuntzen followed Behring's method of treatment, giving 600 immunizing-units to children on the first or second day of the disease; to children coming under treatment later, or adults, twice that dose.

HAGER (*Centralblatt für innere Medizin*, 1894, No. 48) reports twenty-six cases of diphtheria treated with Behring's serum in private practice. The diagnosis was controlled by bacteriological examinations. One case proved to be scarlatinous and ended fatally. Of the twenty-five cases of true diphtheria one died. This was a child of eight months, almost moribund when first seen, and requiring tracheotomy before the injection was made. The child lived four days; the local condition improved, but death occurred with increasing weakness and with bronchitis. The other cases were classified as follows: Mild, 8 cases; moderately severe, 6 cases; severe, 10 cases. The dose of antitoxin varied from 250 to 2500 or more immunizing-units, on the average 1000 to each case. The usual course of the disease after the injection was so characteristic that Hager could not doubt the effect of the remedy. A day after the injection the general sensation improved; after two days the fever usually subsided; after three days the pulse was less frequent. After one day the membrane appeared sharply defined, and usually by the fourth

day it had disappeared. Serious consequences were not observed. The local reaction was slight. In five cases an urticarial erythema occurred around the point of injection, in one case at a distant point. Thirty-five children in infected families received prophylactic treatment. Of these, four acquired diphtheria. One recovered after an injection of 500 units, two without treatment (the treatment of the fourth is not mentioned).

Hager calls attention to the importance of using the serum in private practice, not only on account of the possibility of beginning early, but also on account of the lessened danger of severe complications (especially streptococcus infections) so common in hospitals.

MOELLER (*Ibid.*) reports briefly the results of the treatment of diphtheria with and without serum in the Magdeburg (Altstadt) Hospital. The serum was not used in mild cases, nor in cases brought in moribund. Owing to this and the fact that mild cases were admitted to the hospital in unusually large numbers, the author does not feel permitted to draw conclusions. Of the cases in which tracheotomy was performed, those treated with serum had a mortality of 39.6 per cent., and those without it, 55.6 per cent. The death-rate of the former is the lowest yet reached in the institution, but it is drawn from a comparatively small number of cases (41).

The author thinks that in comparing results those of tracheotomized patients are most reliable; but considering the almost hopeless condition in which this operation is often done, the conclusion does not seem a proper one.

PERFORATION OF THE DIAPHRAGM IN GASTRIC ULCER.

L. PICK, in reporting a new case, gives an analysis of all cases published in which ulcer of the stomach caused perforation of the diaphragm (*Zeitschrift für klinische Medizin*, Bd. 26, H. 5 and 6). In all, twenty-eight cases were discovered; but the author thinks that other cases, proved by autopsies, have been observed, and also that in certain cases of so-called idiopathic suppurative pleurisy or pericarditis gastric ulcer was the cause. (In regard to this, however, Biach has shown that in 918 cases of pyopneumothorax only two were due to ulcer of the stomach.) According to Pick, perforation of a gastric ulcer into the thoracic cavity is twice as frequent as adhesion to and perforation of the anterior abdominal wall. The commonest outlet is in the pleura or lung, and affected the left pleura nine times, the left pleura and lung seven times, and the right pleura once. In the latter case the perforation was consecutive to subphrenic abscess. The pericardium was affected alone in six cases, and the pericardium and heart in four. In one case the mediastinum was affected, and in the author's case the anterior thoracic wall, with the formation of a tumor in that part. In twenty cases the perforation was direct, and in eight indirect, or following subphrenic suppuration. In this conclusion the author differs from Brinton, who studied a smaller number of cases. Pick's analysis shows that the rare ulcers of the fundus are much more likely to rupture into the thorax than those of all other parts of the stomach, but that the occurrence of thoracic complication depends largely on the existence of old adhesions and alterations in the position of the thoracic organs. The exciting cause of the perforation in most cases is mechanical, either by distention from food or gas, vomiting, straining at stool, etc.