this case, because I consider it probable that any *similar* dislocation will, as in this instance, remain unreduced^a, and the knowledge of its favourable termination may be useful in reference to future prognosis. Nowhere, I think, could the efforts of Nature, in her power of removing impediments by absorption, be more beautifully exemplified than here, whilst at the same time I have no doubt that recovery was greatly assisted by the steady perseverance of the patient in following the directions given him to use the tepid or cold douche twice a day, followed by hand-rubbing the foot, and taking as much exercise as he could without producing heat or pain.

ART. XII.—*On Hemorrhage in Fevers.* An Essay. By HENRY KENNEDY, A. B., M. B. T. C. D., Fellow of the King and Queen's College of Physicians in Ireland, Physician Extraordinary to Sir Patrick Dun's Hospital.

(Continued from p. 25.)

THE next form of hemorrhage to which attention may be directed is *that from the stomach*. In fever it is, as a whole, a rare occurrence. But it does occur. If, however, we include one form of discharge from this organ, hemorrhage might then be spoken of as a much more frequent event. I allude to what is known as black vomit, which many look upon as blood altered by the secretions with which it comes in contact. There appear to be strong arguments for this view of the question, and it is the one I hold myself. Inasmuch, however, as it may still be considered a doubtful point, I shall not dwell on it as long as I otherwise would, except to say that in acute disease it must ever be looked on as a most serious symptom, too often leading to a fatal result. Neither is it confined to the common fever of these countries, but is known to form a characteristic symptom in the yellow fever of warm climates. Besides ordinary fever, I have seen it occur in bad cases of scarlatina, small-pox, intus-susception, &c., all such being most serious, and very generally fatal. The coffee-ground vomiting—so often attendant on ulceration of the stomach—I take to be a modification of the black vomit. The latter, there can be no doubt, is present without ulceration; and the former may, I believe,

^a Because the proximal end of the metatarsal bone of the great toe becomes immovably fixed behind the tuberosity of the internal cuneiform bone, wedged in the cavity which exists between it and the cuboid bone, locked in the hollow of the tarsal arch.

be so too. The stomach may, in fact, allow blood to exude, just as other portions of the mucous system do. In the cases of acute affections I have seen, in which black vomit was present, it is worthy of note that it has never been thrown up in the first instance, but has always been preceded by vomiting of bile; at first, most commonly, yellowish, then passing through the various shades of green, and, finally, assuming a black, or, more correctly, a sooty hue. Of cases of this kind I have now seen a large number, but as they might not be considered as fairly coming under the head of hemorrhage cases, I shall not give any of them here. Of the following, however, there can be no doubt, as being examples of real bleeding from the stomach, and in the course of fever.

CASE XLV.—In August, 1850, a woman, twenty-eight years of age, was admitted into hospital, labouring under heavy fever, but not marked by spots. She passed through this attack, and was so far well as to be out of bed, when she relapsed, and was now attacked with very severe vomiting. She threw up a quantity of yellow bile, and when there appeared to be no more to come, she still continued retching, in spite of the remedies employed. In this state, and apparently from the violence of the straining, she threw up a quantity of blood of a darkish colour. Subsequently the vomiting gradually ceased, and she slowly, but steadily recovered,—the type of the fever being all through what is called gastric, which prevailed much at the time.

CASE XLVI.—In May, 1854, a girl, named Bryan, fifteen years of age, was admitted into Cork-street Hospital. She had fever of a very urgent kind, marked by constant delirium, deeply suffused eye, rapid pulse, spots. In the course of her illness, and just after she had taken some whey, her stomach became suddenly sick, and she vomited not only the whey, but also about one ounce of blood, of a brighter colour than is usually seen to come from the stomach. After a prolonged illness—her strength having been seriously impaired—she recovered.

CASE XLVII.—In July, 1852, a woman named Perkins, sixty years of age, was admitted labouring under bad fever, and slightly jaundiced. There were doubts about the duration of her illness, but she was known to be at least a week ill; she had great distress, visible even through the cloud which hung over her intellect; and her pulse was up to 140. The day after admission it was found her stomach had been getting gradually irritable during the previous twenty-four hours. She had thrown up a large quantity of dark green bile, and with

this every other symptom had increased in urgency. Her tongue was dry, red, and pointed; the pulse barely perceptible at the wrist; she was constantly raving. The vomiting of bile was succeeded by the throwing up of a quantity of black-coloured blood. In the course of the following night she died; most likely on the eleventh day of her illness.

These cases are sufficient to illustrate the form of hemorrhage now under consideration. As already stated, when bleeding occurs from the stomach in fever, it is mostly—at least in my experience—in connexion with previous irritability of the organ, as shown by the throwing up of bile. In such we can have little doubt of the source of the blood. But it must not be forgotten that it may have been previously swallowed and then thrown up, and of this I think I have seen examples, though not calling for further notice here. The last case given—except in the throwing up of blood, which is of rare occurrence—may be noticed as an example of a type of fever ever demanding the closest attention. When vomiting begins at this period, that is towards the eight or ninth day of fever, the result is too often fatal. Nor is the type confined to common fever alone. It may occur, and I have seen it, in scarlatina. It will be observed that it is the period at which the vomiting occurs, and not the act itself, which makes it a serious symptom. But this point scarcely comes within my present scope.

In immediate connexion with hemorrhage from the stomach, though of infinitely more importance, comes *bleeding from the bowels*,—a form of bleeding which rarely occurs that it does not prove serious. It is probably the most important which is met with in fever, and I shall, therefore, speak of it at some length.

The number of cases of which I have notes amounts altogether to 39. Of these there were, in

Men, 19, of whom 5 died.
 Women, 20, of whom 6 died.

That is, of 39 cases, 11 proved fatal: *more than a fourth of the whole*. Though this is certainly a serious mortality, yet, if we consider the form of bleeding we are now speaking of, it will probably not be thought excessive. The common impression seems to be that bleeding from the bowels in fever is almost a fatal sign. As far as these numbers go they at least must tend to modify this opinion, and show us that, serious as these cases always are, they are only fatal in the proportion given above. The equality in the number of cases in the two sexes is worth

noting; showing a marked contrast between this kind of hemorrhage and that from the nose. A more striking contrast, however, and one of much greater moment to note, between the two hemorrhages, is in relation to the period at which each declares itself. Epistaxis, as already shown, appears early in the disease. The first week of fever is by much its most common time; whereas bleeding from the bowels is, with a few exceptions to be spoken of, ever a late symptom. There is still another contrast between these two hemorrhages: that from the bowels is almost always in large quantity, whilst from the nose it is very generally, though not constantly, the reverse.

Hemorrhage from the bowels has been just spoken of as a late symptom of fever. But there are exceptional cases, which, though very few in number, are so important in themselves as to call for a particular notice. Hence it becomes necessary to divide the cases into two classes: those where the bleeding occurred within the first week, and those where it was a much later symptom. Of the first class four instances have come under my notice. Two of these were hospital, and the other two private cases; and it is to be observed, three of these were fatal. What it is renders these cases so serious I am somewhat at a loss to determine. It is not the loss of blood, for in these instances it is of the smallest amount,—the very opposite, in fact, to what commonly occurs. The type of the fever is, as far as I have seen, gastric, ushered in by vomiting, red tongue, &c. There was an intensity, however, about the symptoms, even from the first, which could not fail to attract attention; and it is particularly to be noted that treatment had very little influence on the symptoms, and even when it had, it was but temporary. But probably some detail of one or two of these special cases will not be misplaced.

CASE XLVIII.—In April, 1843, a lady, thirty-four years of age, married and the mother of a family, was attacked with fever. The attack seemed to begin very suddenly, by a tendency to faintness; shortly succeeded by a violent rigor, and this again by severe vomiting; the bowels at the same time being rather too free. I saw her two days subsequently. The vomiting had nearly ceased, but there was still a tendency to diarrhoea. The tongue was coated with a whitish fur; the pulse 120, passing very rapidly under the finger, and with a jerk; and there existed a highly pungent feeling on the surface of the body; in fact, well marked calor mordax. Pneumonia was looked for, but there was none. The mind was quite clear. In very much this way she continued the next three days; the fever, however, gaining still greater intensity,

and the general distress increased. The diarrhœa too had not lessened; she was disturbed two or three times in the twenty-four hours, and at this period—the sixth day of her illness—she passed a small quantity of blood. From this time every symptom became worse. The pulse rose to 140; the tongue became coated to a degree I never saw equalled; the abdomen got tympanitic; and a very rapid breaking out occurred about her mouth and nose. She finally had intermitting wandering, and so she sunk, the tenth day of the fever.

CASE XLIX.—In April, 1851, Tallon, a remarkably fine young man, aged twenty-five years, was admitted into hospital, labouring under fever, which began by very severe vomiting. His pulse was 96, his skin morbidly hot, and he had much general distress. On the night of the fifth day he passed some blood from the bowels. At this time he had no localized pain; but on the seventh day he suffered severely from pain referred to the region of the liver, the muscles here being in a very spastic state. This yielded to treatment, and the case, which at one period threatened to be most serious, ultimately made a good recovery.

The two last cases are sufficient to illustrate the form of hemorrhage of which I am speaking, or rather the early period at which it may be met. Each was an example of what is called gastric fever. There were no spots in either, and the mind was perfect. It will have been observed that the bleeding in each was within the first week, that it was in small quantity, and could have had no direct influence on the fever. A greater contrast could scarcely occur than between this kind of hemorrhage and the one yet to be spoken of. Before making any more remarks, however, I shall give a few cases illustrative of this form of bleeding^a.

CASE L.—In May, 1845, a man, fifty-seven years of age, came under my care. He had been labouring under fever for three days previously. His pulse was 100, his tongue inclined to be brown, and his eyes deeply suffused. He had wandering at night. He was not too sober. The fever went on till the eleventh day; the tongue, in the mean time, having become quite dry, the lips covered with sordes, and the disease generally much more threatening, particularly the wandering, which was now constant. The attack was in fact modified by the man's previous habits. On the eleventh day—possibly a day

^a The only special notice I have been able to find in reference to hemorrhages, as occurring in fever, is in relation with the kind of bleeding spoken of above. The paper I allude to, a very valuable one as far as it goes, is by Dr. Hlott, and will be found in the fourth volume of the London Medical Gazette, p. 36.

later—he was suddenly seized with hemorrhage from the bowels, and at two turns passed a quantity of blood amounting to a pint. This I saw. It was dark venous blood, and part of it coagulated. Very marked relief followed, and more particularly to the brain, which all through had been the organ chiefly engaged. The fever, however, was not cut short, but went on some days longer, the tongue all the time being dry as a board. The man ultimately recovered. He had no spots.

CASE LI.—In October, 1846, a girl, named Meehan, aged 17, was admitted into Cork-street Hospital. She was of a well-marked sanguineous temperament, and had been eight or nine days in fever. On her first admission her illness had all the characters of synochus, and so continued for two days, when the symptoms suddenly changed and became typhoid. Her lips and tongue became covered with sordes, her mind heavy and confused, and the abdomen in a slight degree tympanitic. So she remained five days, when, on or about the seventeenth day of the fever, and during the night, she was seized at three or four turns with hemorrhage from the bowels. The blood was nearly pure, had several clots in it, and amounted to rather more than a pint. On seeing her four hours after, it was evident the system had received a considerable shock. Her breathing was hurried and nervous; her pulse 136, very weak; and her extremities cold. She rallied, however, from this state, had no further bleeding, and ultimately made a good though very slow recovery. The fever ran on very nearly till the thirtieth day. This case had no spots.

CASE LII.—Byrne, a man thirty-five years old, admitted in August, 1850. He is the eldest of three brothers, all grown men, who are now in hospital. His illness began fourteen days before his admission, and two days before either of his brothers. He has now no spots, though his brothers have; but his fever is of a very urgent character, his chest being much engaged; at the same time that his pulse is upwards of 130, and his mind much confused. Early on the morning of the seventeenth day—that is, after being three days in hospital—he was suddenly seized with bleeding from the bowels, and at two turns lost twelve ounces of blood, very nearly pure. Immediately after he was described as having some kind of fit in which he became unconscious; and when visited his hands were found livid and cold, his breathing very hurried, his pulse not to be felt at the wrist from the jerking of the tendons; and either from the dryness of his tongue, or his unconscious state, or both, he was unable to protrude it. It is enough to say of this case that after this attack he remained several days in a most precarious

state, the breathing very hurried and laborious, and his tongue dry and very red. He finally, however, recovered, his convalescence being of the very slowest. Previous to the commencement of convalescence he presented an example of very well marked crisis by sweat, attended by an extraordinary amount of nervous tremor. This took place about the twenty-seventh day.

CASE LIII.—In March, 1847, a woman named Bohan, fifty years of age, was admitted labouring under heavy fever, her chest being at the same time most seriously engaged with what appeared to be suffocative catarrh. Her general state may be described as being typhoid; the tongue loaded with a brown fur, the eyes much suffused, and the intellect heavy and slow. The duration of her illness could not be clearly made out, but it was known she was some time ill. Whilst in this state, and apparently *in extremis*, she suddenly began to pass blood, nearly pure, from the bowels. This, so far from injuring her, relieved the chest. The dyspnoea lessened, and with it the other symptoms improved; and this apparently hopeless case came round, though after a most severe and protracted struggle.

CASE LIV.—In June, 1855, Burke, a man twenty-seven years of age, was admitted in the sixth day of fever. He was reported temperate. Spots were already visible, and in the course of the next two days he exhibited a copious crop of petechiæ. The fever ran very high, the brain being much engaged. His eyes were deeply suffused and pupils contracted; he was constantly raving, and a person was required to be with him night and day, as he was ever striving to get out of bed, and even out of the ward. His pulse ranged about 112, and was on some days dicrotous; and his tongue was covered with a dark brown fur, and was badly protruded. Though measures of as active a kind as his state allowed of were put in force for four days, still the fever did not yield in the slightest. At last, on the night of the eleventh day, he was suddenly seized with hemorrhage from the bowels, and passed at two turns nearly twelve ounces of blood, some of it in clots. This produced scarcely any sign of shock, except that his face when seen in the morning was paler than the day before. But it did cause a very marked improvement in the fever; and though it could not be called critical—as the fever went on a few days longer—still there was no fear afterwards for the man's life, which there had been previously; and he made a good, and even rapid recovery.

CASE LV.—In October, 1849, a man thirty-five years of

age was admitted into hospital, in an advanced stage of fever; he was densely spotted, and had constant raving. His pulse was rapid, and running together. On or about the fifteenth day he was suddenly seized with copious hemorrhage from the bowels. This recurred again and again, and he rapidly sank. He had been kept in a wretched room, and nothing had been done for him.

CASE LVI.—In September, 1846, a man named Murphy, twenty-four years of age, was admitted into the nine-bedded ward of Cork-street Hospital. He had been ten days at home labouring under fever, and had on admission a number of bright, well-defined spots over the chest and abdomen. His illness was marked by great restlessness; a rapid, indistinct pulse; very dry tongue; and much suffusion of the eyes. His nights were much the worst, and he disturbed the other patients. On the fifteenth day of his fever there was some tympanitis, with a tendency to, rather than an actual, diarrhœa. On the sixteenth day he was suddenly seized with a great rush of blood from the bowels, the quantity being estimated at more than a pint. The blood was very dark coloured, and appeared to be nearly pure. The shock consequent on this was so great as to cause a dread that the patient would die at the time. Under the use of stimulants, however, he rallied. But the rally was not attended with a corresponding improvement in the general symptoms. On the contrary, the following day the lips and tongue were thickly covered with sordes, and the restlessness had become extreme. The pulse could not be counted at the wrist, but at the heart it beat 180, as reckoned by Dr. Law, who happened to see the patient at this period. The dejections now—that is, about twenty hours after the hemorrhage—were black and fetid. The patient lived two days subsequent to the loss of blood.

Though the notes of the following case are not as complete as I could have wished, still I would direct a special attention to it. The case is, as far as I know, unique, and yet not the less important on that account. It will call for some observations further on.

CASE LVII.—In October, 1852, a girl named Daly, thirteen years of age, was admitted into Cork-street Hospital, labouring under fever. She had been sent from the South Union Workhouse, and had been six days ill, or rather complaining, for she had been only three days in bed. Her fever presented no peculiar feature whatever till November 4, on which date she was twelve days ill. The two days previous to this she appeared to be improving, and had even asked for food.

But this is of frequent occurrence amongst our poor, whilst heavy fever is yet on them. In the evening of the 4th she was suddenly seized with collapse, marked by cold and livid extremities, and weak pulse at the wrist. She also vomited, and complained of pain in the abdomen; but this was not increased by pressure. She lay on her back, and her legs drawn up, and was perfectly collected. She continued to vomit, or rather retch, at intervals through the night, and complained of the pain occasionally; though neither was of a severe character. Her face, however, gradually assumed a more pinched and livid look, her extremities got colder and colder, the pulse failed at the wrists, and she died at nine o'clock the next morning, fourteen hours after the signs of collapse had set in. An enema which she had got had only brought away a small quantity of fæces. She died on the thirteenth day. Being unable to obtain an examination of the body at the hospital, I followed it to the South Union, where, through the kindness of my friend Dr. Shannon, I was able to do so. The body was fully grown for a girl of her years, and there were slight marks of cicatrices on one side of the neck. The head was not examined, and the chest was, in every respect, healthy. The abdomen was not fully opened, however, till the cause of death became at once apparent. A large portion of intestine was seen to be filled with blood; and on closer examination this proved to be the lower part of the jejunum and the upper of the ileum. About twenty inches of intestine was so engaged. The blood lay here loosely coagulated, and of a very dark colour. The corresponding mucous membrane was stained of the very deepest hue; but the most minute examination could not make out even a trace of ulceration. There was no blood either above or yet below the part indicated; near the sigmoid flexure lay a small quantity of fæces of the natural colour. The hemorrhage was in fact strictly localized, and the blood had not made its way from the place where it had exuded. The mesenteric glands were not enlarged at all. There were about two ounces of serum tinged with blood in the cavity of the peritoneum. The contrast between the parts where blood lay in the intestine and that portion where there was none, either above or below it, was most remarkable. Judging from the state in which I found the blood, I would say the process of pouring it out had been a gradual one, probably occupying from the commencement of the collapse till the death of the patient.

CASE LVIII.—A healthy looking girl, eighteen years of age, a servant, was admitted into hospital on the fourth day, after a severe rigor. Her face was covered with the rash of

small-pox, but of a very unfavourable kind; the upper part of the body presented numerous spots of purpura, interspersed with the same kind of eruption as that on the face, and, in addition, there were great patches of redness here and there over the person; one in particular occupied the lumbar region, and was larger than the open hand. The fever attendant on this eruption was not so high as might have been expected. Her first night in hospital was most restless, she raved constantly and was hard to keep in bed; the following day, the fifth, the symptoms, and more especially the rash, had increased to a fearful degree; the eye-lids had become swollen and livid, the tongue covered with the rash, and the voice nearly lost; the spots of purpura had increased immensely, and, in addition to all, hemorrhage had occurred from the bowels, and went on from hour to hour to a degree I never saw equalled. In as many hours she literally lost five to six ounces of blood. She sank rapidly the sixth day of her illness. This girl had a well-marked cow-pock cut on her arm. She had also bleeding of a different kind from that spoken of, to be noticed again.

CASE LIX.—Donelly, a woman of large size, aged 35, and not vaccinated, was admitted into hospital in June, 1854. She laboured under small-pox of a very bad kind, the rash being confluent on the face, flattened, and what is known as pasty. It was curious she had the greatest horror of getting the disease. The symptoms, though at first not very urgent, rapidly became so. Amongst others, on the eighth day bleeding from the bowels occurred; this was slight at first, but it increased almost from hour to hour, both in the frequency of the discharges and the quantity of blood lost; and this patient sank on the tenth day of the attack, apparently run down by the direct effects of the hemorrhage.

Hemorrhage from the bowels is known to be of common occurrence in many cases of dysentery. This subject, however, though one of great importance, does not come fairly within my present scope. But fever complicated with dysentery is also met with, and is often a most serious complication. I saw many instances of it in 1847-8. As, however, the cases are becoming too numerous, I shall limit myself to a notice but of one.

CASE LX.—Doyle, a girl twenty-four years of age, and having a scrofulous mark on her neck, was admitted labouring under heavy fever. The day was not exactly known, but she was densely spotted, and so ill as to be passing under her: and she had a tendency to diarrhœa from the onset of her illness. Within twenty-four hours she began to pass blood, very nearly

pure. This was attended with considerable pain on pressure, and also tenesmus; and after thirty-six hours the dejections became dysenteric in a very marked degree; while the smell about the bed was indicative of the disease. It is enough to add of this case, that after a very prolonged struggle the patient recovered. Her appearance on the whole was delicate, and her skin remarkably fine^a.

Cases of intestinal hemorrhage occurring in connexion with scarlatina must, I should think, be very rare. Still these cases do occur, and I have notes of two such. As they do not tend, however, to illustrate any new feature, it does not appear necessary to notice them further here.

The cases of bleeding from the bowels now given, beginning with No. XLVIII., are, probably, sufficient to illustrate the chief ways in which this serious kind of hemorrhage shows itself. Its occurrence, in any form, is so important as to induce me to make a few remarks having a direct connexion with this part of my subject.

The class of patients in which these hemorrhages occur it is of consequence to note. I believe it will be found that the great majority of them are of the strumous diathesis: at least such is the conviction on my own mind, for I have scarcely any positive proof to advance^b. The greater number of them, however, more particularly marked amongst females, will be found to present fine skins, often light hair, and a degree of mobility of the nervous system, highly demonstrative of the state alluded to. In such cases—and again I must say, chiefly in females—these hemorrhages may recur at considerable intervals of time; even a week may elapse without any sign of bleeding, and then there may be a second rush of blood; and this may even recur a third time with an interval between; and, in this way, some of these cases become most difficult to deal with, to say nothing of the great uncertainty of the result. The point, however, to which attention is now directed, is the kind of constitution in which such occurrences

^a I find the following amongst my notes:—A man named Meade, twenty years of age, was attacked with common fever. After being eight days ill he began to complain of pain, and all the attendant symptoms of dysentery, passing a considerable amount of pure blood. He got over this attack and finally recovered. He had no diarrhoea previous to the dysenteric attack. In this instance the fever preceded the dysentery in a very striking manner. It is worth noting, that the very opposite of this may be met. I have seen regular spotted typhus come on in the course of an attack of dysentery, and pass off, leaving the patient still affected with the latter. This case occurred when fever was rife, and in a fever ward.

^b It will be recollected that in some of the cases given, marks, most probably strumous, are described as existing on the neck.

take place. It is of much consequence that it should be recognised, as it has a direct bearing on the treatment of these cases.

As to the seat of bleeding, it is, I believe, most usually from some part of the mucous membrane of the small intestine; but I would not speak positively on this point, for it is not so easily determined as might at first sight be supposed. One reason for this is, that the patient may live some days after the hemorrhage occurs, and in such it is quite possible, as I have found, that no trace of the source of the bleeding can be detected. The mucous membrane, in point of fact, is sound, and even all signs of blood may have disappeared, though there had been extensive hemorrhage a few days before death. I have seen such cases. A second reason is, that the blood may, of course, be removed from where it was poured out. It is thus, I believe, to be explained, that I have found traces of blood in the colon, though, from other evidence, I was able to satisfy my own mind it came from a source higher up. The mucous membrane of the colon was, in fact, quite pale, though some blood lay on it, whilst that of the small intestine was most intensely congested. As a whole, it will be a matter of surprise to those seeking for the source of the bleeding in these cases to find what slight traces are left after death; and I believe it to be very rare to find such a quantity of blood as existed in Case LVII., even though much larger quantities had been passed during life.

That the source of the blood in these cases is not necessarily connected with ulceration is, I think, certain: and this is an interesting point to notice, for it might naturally be supposed that the ulcers met in the ileum in the progress of some fevers, and now so well known, might lead to, or at least be associated with, hemorrhage from the bowels. This is not the case. My own experience furnishes me but one example of ulceration of the ileum, where there was also hemorrhage. The patient was a woman twenty-eight years of age, who died on the thirty-first day of fever. In this case there had been copious bleeding on the eighteenth day, and, to a slight degree, the nineteenth; after this all bleeding ceased. On making a *post mortem* examination, well-defined ulcers existed in the ileum, but there was no evidence of where the blood had come from, either from the ulcers or elsewhere. But this point is still more strongly confirmed by others, though it has not, I think, been dwelt upon as its importance demands. Thus, Louis gives a detail of fifty-two cases of fever where ulcers were found, and yet out of all these hemorrhage is noted as being present in

but two; and Bright's cases confirm the same, so that the point may be looked upon as nearly established as a point of the kind can be; and hemorrhage of the kind already detailed, and occurring at an advanced period of fever, may be considered as a symptom of that species of fever in which ulceration does not exist, and may consequently, when it occurs, help us to diagnose the one from the other.

Hemorrhage from the bowels has been spoken of as a late symptom of fever. But, it is worthy of noting with what regularity it declares itself. Thus, as the fourth day appeared to be the most usual one for epistaxis, I find the seventeenth set down as the day in which this other form of bleeding most generally took place. One case was somewhat remarkable:—a young lady, seventeen years of age, after being an entire week ill of fever, was literally brought a journey of fifty miles to Dublin. On the seventeenth day of the fever she had hemorrhage from the bowels, but made a good recovery. In another instance of a gentleman seen by Sir Henry Marsh and my friend Dr. Mease, copious hemorrhage took place on the seventeenth day. This case also made a good recovery. And so of others. Speaking generally of the subject, and from my own experience, I would say from the fourteenth to the eighteenth day is much the most usual period for this kind of bleeding; and, as a single day, the seventeenth more frequently than any other.

I cannot leave this part of the subject without directing a moment's notice to Case LVII. After a good deal of search, I have not been able to find any case analogous: and yet, though a solitary one, it is not to be passed by, as being a case of mere interest. It will have been observed that the symptoms, within the last few hours of life, were not such as would have led any one to suppose that bleeding was going on; in other words, no diagnosis at all approaching the truth could have been made; and yet few, I presume, would say that the symptoms and death were not due to the hemorrhage. As already stated, it is more than probable the blood was slowly poured out, and began at the moment the patient first complained of pain and sickness; and this, together with the gradually increasing lividity of the extremities, only added to the difficulty. But now that we have such an instance before our eyes, may we not in future hope to recognise a case of the kind during life? and so be prepared for the termination, which, it is to be feared, must necessarily be fatal. There is still another point of view in which this case may be considered. Sudden death in the course of fever, and without any apparent cause, is not of unfrequent occurrence. Several such instances have now come under my

notice. But the subject is quite too extensive and important to be noticed further here; except that the case given teaches us at least one of the causes which may lead to death—a cause, too, so obscure in reference to the symptoms present before death, as to make the case the more valuable and striking. It should be observed, however, that I have met instances where the symptoms were exceedingly similar, but where the patient did not die. Would we be justified in setting down such cases to a partial pouring out of blood? Further experience only can answer this question^a.

To *hemorrhage from the uterus* attention may next be directed, as constituting an important division of the subject. It would appear to be of as common occurrence in fevers as the last spoken of, whilst it differs from all others in one respect, that it is very generally, though not constantly, mixed up with the natural functions of the organ, if it may be so expressed; and thus it is that menstruation and pregnancy, leading to miscarriage, often come to play an important part in fevers; which will be evident as we proceed. The number of cases of this class of which I have notes amounts in the whole to twenty-one, of whom there died five, that is, as near as may be, one in every four. This rate of mortality also is, I believe, less than what is usually set down to cases of the sort; and though every individual case must be considered on its own merits, still these numbers may afford an approximation to the truth, and may so far be valuable.

Uterine hemorrhage presents itself to our notice in fevers under a considerable variety of aspects. Like the others, it may be trivial or severe. Of two of the hemorrhages of which we have already spoken—that from the nose and from the bowels—it will be recollected, that while one was very generally an early, the other was as generally a late symptom. Uterine hemorrhage, on the other hand, may be considered as being most common in what may be called the middle stage of fever,—about the eighth or ninth days being the most frequent periods at which it is met. It does occur both earlier and later than this; but such may be looked on as exceptions to the general rule. It will be observed, in what follows, that little or no distinction is drawn between menstruation and actual hemorrhage; for difficulties exist in a question of this sort which are not easily overcome. That both the natural function and real hemorrhage

^a On some other occasion I hope to direct attention to the occurrence of sudden death in fever.

may show themselves, quite separately, in the progress of fever, is, however, certain. It is also to be observed that the variety existing in this part of the subject will require a detail of a greater number of cases than might at first sight appear necessary. But they will be given as briefly as may be.

CASE LXI.—In June, 1850, a woman of colour, thirty years of age, was admitted, labouring under heavy fever. She was five months pregnant. From the colour of her skin it was not possible to say whether there were any spots. She had considerable rambling, restlessness, and pain in the back; and when the fever had reached the ninth day, she miscarried of twins. In five days she appeared convalescent, but then relapsed; the attack now being much more serious than at first. She ultimately, however, did well. It was doubtful whether the second attack was connected with puerperal fever, for it had some of the symptoms. It was curious of one of the children, a female, it took after the character of the mother; whilst the other, a boy, was white-skinned. This last presented some very distinct spots of purpura close to the left knee.

CASE LXII.—Robinson, a woman of very large size, twenty-eight years of age, and five months married, admitted in July, 1850. She laboured under simple fever, her chief complaint being pain in the back. No spots were visible. On the eighth day of the fever she miscarried; and within twenty-four hours after was seized with profuse sweat, which proved distinctly critical. She made a good recovery. The supervention of the crisis, so shortly after the miscarriage, was, in this instance, very remarkable; for the usual reasoning would lead us to expect that the latter event would surely interfere with such a process as crisis. Yet it did not do so^a.

CASE LXIII.—Parks, aged twenty-seven years, a delicate woman, admitted in April, 1853, labouring under what appeared to be a very slight attack of fever. She said she was two months pregnant, and was now ill four days. Though mild at first,

^a It is wonderful what an endless variety is met with in disease. Thus, I find the notes of the case of a woman who miscarried on the eighth day of a bad fever, and at the sixth month of pregnancy. She recovered from this, but then again relapsed, and had now the most obstinate vomiting, a symptom not present in her first illness. She finally recovered. It is generally possible to foretell, from the nature of the case, and attendant symptoms, when miscarriage is about to take place; but it may be otherwise. Some years back I saw, with my friend Dr. King, now of Galway, a case of heavy spotted fever, where miscarriage occurred on the ninth day, and without any notice that such was about to take place. The state of the patient's intellect may partly have accounted for this. I find also the notes of the case of a woman, aged 22, who in the course of her fever bled sharply from the nose on the fifth and sixth days, whilst on the tenth day she miscarried at two months, but ultimately did well. This is not a common case.

her fever slowly, but very steadily, increased, and in the course of six days more, the tenth of her illness, had become very serious. Her tongue was now dry, brown, and contracted, and her pulse much more rapid than at first. In this state she aborted, but had little or no hemorrhage. The shock, however, appeared to be too much for her very weak state, and she lived but nineteen hours after. She had no spots, nor any signs of puerperal fever previous to the abortion, nor after that event. She gave me the idea of a woman who had much mental distress.

CASE LXIV.—Quinlan, aged twenty-six years, admitted into hospital in January, 1852. She was five months pregnant. Her fever was of a very intense kind; her pulse 130, bounding; her skin burning hot; and the general distress very great. She chiefly suffered from pains of a very severe kind through her lower limbs. At times, too, her respiration was hurried, though the stethoscope detected nothing wrong. There was clearly something unusual about her case from the very first. In this state nearly she continued an entire week; all the symptoms, however, getting steadily worse, and particularly the pains through her limbs. At this period, being now ten or eleven days ill, miscarriage took place, attended by as little loss as well could be. This event did not appear to cause any change in her general state. The fever went on as before, with a steady progression. Tympany ensued: then, and for the first time, there was evidence of pneumonia; and finally, there was the clearest evidence of purulent effusion into several joints. Even in this state, however, and with the fever—now become typhoid—the struggle was most prolonged; and it was the seventeenth day before this poor woman sank.

Though this case presented symptoms often seen in the puerperal state, yet I believe there was no connexion in this instance between the fever and the pregnancy. I have seen precisely the same kind of fever in men, and a most important class of cases they are,—always most serious, I might say fatal. We now know them to constitute one of the forms under which diffuse phlegmon shows itself; but the subject is too extensive to pursue farther here.

CASE LXV.—In September, 1852, a woman named Craven, aged 28, was admitted, labouring under fever. She had been nursing before her illness. The fever did not present any peculiar symptom till the ninth day, when some shedding occurred, and to a considerable extent. It went on three days, gradually lessening, however; and with it the general symptoms began to improve, and the patient made a good recovery.

In this instance the hemorrhage appeared to be of the same kind as might take place from any other part of the body; and the fact of the patient's nursing just previous to the attack makes it very probable that the bleeding was not connected with the pregnant state. In this instance, the hemorrhage appeared to be decidedly beneficial, affording a marked contrast to the following.

CASE LXVI.—Roberts, aged 30, admitted into hospital in September, 1852. She had been nursing when attacked by the fever, which latter assumed a very severe character. She became densely spotted, her eyes much suffused, and her mind wandering. She was restless too. In this state, and when at least eight days ill, she was seized with severe hemorrhage from the uterus; which, though checked for the time, recurred again and again. With it every general symptom became worse, the restlessness being extreme; and so she sank, about the thirteenth day of her illness.

In this instance the hemorrhage appeared to be just the same as if it had occurred from the intestinal mucous membrane, all the general symptoms being exactly analogous. In it, like the last case too, there is every probability that pregnancy had nothing whatever to say to the bleeding.

CASE LXVII.—In July, 1850, a girl, aged 18, was admitted into hospital, labouring under bad fever. All her family were in hospital at the time. She was a girl of a pale, sallow aspect, though not by any means thin. She had great distress, her tongue red, and her pulse very rapid, being up to 140. She said she was only four days ailing; but her appearance and symptoms would have indicated a longer period. The day after admission, she was attacked with symptoms like English cholera,—of which there were other examples at the same period^a. This attack ceased very suddenly; but it did not appear to check the general symptoms in any way. On the contrary, all got rapidly worse. The tongue and lips became covered with sordes, the pulse rose still higher, and the restlessness was extreme, and attended with great general distress. While in this state she was suddenly seized with severe hemorrhage from the uterus, which rapidly ended her life, being now probably ten days ill. The bleeding in this instance was ascertained not to be menstrual.

CASE LXVIII.—Lynam, aged 23, was admitted into hospital in May, 1854. She was near her first confinement, and was labouring under small-pox. She had never been cut.

^a When cholera prevails, it modifies materially our ordinary fevers.

The disease became rapidly confluent; and was attended with great swelling of the face, and complete loss of voice; with all the other symptoms which render this form of the disease so serious. On the eighth day her labour came on, and, as far as it was concerned, everything went on well. Still, the general symptoms of the disease pursued their onward and fatal course, and this patient sank the tenth day of her illness.

Before leaving the subject of uterine hemorrhage, it may be well to notice very briefly a few of what may be called exceptional cases: and this chiefly in reference to the time at which the bleeding took place, and the occurrence of menstruation, not miscarriage.

CASE LXIX.—Mrs. H., aged 37, was admitted into Sir P. Dun's Hospital, under my own care, labouring under fever. She was the mother of seven children, and was a thin, delicate woman. Her illness was ushered in by shedding, which lasted part of two days, and which then had none of the features of miscarriage: it was the proper period, too, for menstruation. Her fever went on till the fourteenth day without any particular symptom, when she had a fit of a well-marked hysterical character, from which period she got steadily well. She was treated entirely on wine. The occurrence of a fit, and of apparently a critical character, is not a very rare event in the progress of fever: I have seen different examples of it.

CASE LXX.—Dunne, aged 18, admitted into Cork-street Hospital in December, 1853, labouring under fever of a severe character. The menses had occurred on the fourth day, but did not last the full time, though it was the proper period. She got well in the usual time.

CASE LXXI.—Daly, aged 16, admitted in January, 1853, labouring under high fever of the inflammatory type, suffering much from pains, and more particularly in the small of the back. On the fifth day she had signs of menstruation, but to a very small amount. This relieved the pain of the back, but not the general pains. She passed though a severe fever, still complaining of the pains.

CASE LXXII.—Miss M., a private patient, aged 19, was attacked with feverish symptoms, which ran very high: they proved to be the forerunner of measles. The fever had all the characters of the inflammatory type, and there was great swelling of the face; so much so as to lead me, at first, to suppose the disease might prove to be small-pox. Within the first twenty-four hours, it being the proper period, menstruation came on, and continued not only the usual time, but

very nearly double the period. This had all the appearance of moderating materially the fever, and this lady got well with unusual rapidity.

CASE LXXIII.—A girl fifteen years of age, well grown, was attacked with scarlatina of a very severe type. Two children, living in the house, had already been carried off by the disease. The patient's case was marked by a very rapid, feeble pulse, dark eruption, and much nervous, hurried breathing. In this state, whilst getting wine, and on the fifth day of the attack, she menstruated for the first time: she made a good recovery. This case was seen by my friend Dr. Denham.

In concluding an account of these cases of uterine hemorrhage, it is only necessary to make one remark: that, whether it be menstruation, hemorrhage, or miscarriage which takes place, it does not appear to modify the fever differently from what occurs as the result of bleeding from other parts of the body, except, indeed, puerperal fever happens to be rife at the time; for then the patient is very liable to be attacked with that serious disease, and under a form too often fatal. Of this I have seen several instances. It will not be supposed, from what has preceded, that fever, occurring in a pregnant woman, necessarily leads to miscarriage; it is only a casualty that may occur, but I am unable to say how often. It is to be observed, however, that it occurs more frequently in the earlier rather than the later months of pregnancy, just as we know takes place in cases where no fever exists at all.

Of *hemorrhage from the bladder* I have little to say: as an occurrence in fever, it must be very rare. But a single instance* of it has come under my notice, and that was in a fatal case of confluent small-pox, so like others already detailed that there is no need of alluding to it further here. I have, however, known of an instance of the same disease where recovery took place under similar circumstances. In a third, where hemorrhage occurred from the bladder, in a very bad case of spotted fever, the result was fatal. I do not include here the cases of

* Since writing this I find in my notes the following case:—

Burke, a girl, twenty years of age, was admitted in January, 1852, labouring under one of the worst forms of scarlatina. It was the fifth day of the attack; the body presented one entire sheet of vivid redness, interspersed with numerous spots of purpura, particularly about the shoulders; she said her throat was not sore. The following day she had spit up a quantity of blood of the thinnest consistence, and in the course of the same day passed urine deeply tinged with blood. It is probable this last came from the bladder, but it is not certain. She died the following day. The intellect in this instance kept wonderfully clear.

dropsy after scarlatina, where blood is found in the urine which has come from the kidney. Of this I have seen instances, but such do not fairly come within the scope of this essay.

In the last place, it remains to notice some instances where *hemorrhage occurred from the skin* in the progress of fevers. Of these, which are not, I believe, generally known, I have seen three examples. They are all most serious, in fact fatal, not from the amount of blood lost, but from the state of the system in which this form of bleeding takes place. A brief notice of these cases may not be out of place.

CASE LXXIV.—In December, 1849, a boy, fourteen years of age, was admitted, labouring under fever. His head was the chief part complained of, and for this leeches were put on. There was some difficulty in stopping the bleeding, but he recovered from this attack in the usual time, and was so far well as to be getting food; he then relapsed, and on the fifth day of this last illness the nurse reported that a spot had formed on the inner side of the right elbow. It was not larger than a split pea, and might be described as the most trifling description of slough; not being more, to all appearance, than skin deep. In the course of twenty-four hours, however, it began to bleed, and so sharply as to require pressure at once to stop it. This was scarcely effected when the nose burst out bleeding, and continued oozing, though means were taken to check it. With this state the general symptoms became rapidly worse, and the boy sank as early as the eighth day of the fever; having had, according to the nurse's statement, some kind of fit just previous to death. There were no spots of purpura whatever to be seen at any time, but the body exhibited the utmost degree of lividity immediately after death, and there were signs of blood having been thrown up from the stomach, though it may have come from the nose.

CASE LXXV.—This case requires no detail here, having been already given as Case LVIII. Besides the bleeding there spoken of, this girl, the day previous to death, had sharp bleeding from the back of the right wrist. It seemed to come from a purpura-like spot, and there was no difficulty in stopping it.

The notes of the third and last case I have not been able to find. The patient, I recollect, was a girl of about twenty years of age, of rather an anemic aspect. Her disease was common fever, presenting the characters of what would be called irritative; her pulse very rapid, and her state one of great general distress. She had a very few scattered spots

over the upper part of the body: and two or three of these had the characters of purpura; but so indistinctly marked, and the entire number of spots so small, as to make it very doubtful what their real nature was. When ten days ill this patient got bleeding from the nape of the neck, just where the hair ceases to grow. The blood I saw flowing, and it was most remarkable for its thinness, and its comparative want of colour. It was easily stopped, but the girl lived only thirty hours afterwards; not, however, dying from loss of blood, but from the severity of the fever. It was curious that, after death, I had difficulty in making out the exact spot the blood came from. It was the merest mark.

In connexion with the cases last given it may be observed that the tendency to bleeding from the surface of the body is, in certain cases of acute disease, of common occurrence. Thus, in bad cases of small-pox and scarlatina, where stripping takes place on the elbows and elsewhere, an oozing of blood from the raw surfaces is often to be seen; and the same exactly occurs if it so happen that a blister has been applied^a. In erysipelas, too, the bullæ are often filled with bloody serum; and the union of all these diseases with purpura is obvious to every one. As a part, too, of the same general tendency, I may state that, in some of the very worst forms of typhus, I have seen an exudation of bloody serum take place from the veins of both upper and lower extremities; but particularly the latter. This, though rare, is a very remarkable appearance, and it is not possible to overlook it. With the several conditions last spoken of I have, on different occasions, observed the serum, so often poured out in small quantities into the serous cavities, deeply tinged with blood. This is to be seen in the peritoneum, pericardium, and pleuræ; whilst on the surface of the brain the fluid so constantly found is nearly as constantly deeply tinged with blood, often in patches, rather than a uniform appearance. It is scarcely needful to add, that these several states are not, in any way, necessarily connected with inflammation. Allusion has been already made to a case of fever where a large effusion of blood, coagulated, separated the pleura from the lung; no symptom existed during life to lead to the detection of this state. Spots, like purpura, under the pleura and serous layer of the pericardium, are of common occurrence in fevers; but they are not by any means peculiar to such affections.

^a The appearance of a ruptured spot of blood under the conjunctiva is not unfrequently observed in cases of fever.

In the last place I would notice two instances of fever, where I found blood effused into the substance and sheath of the rectus abdominis muscle, midway between the umbilicus and pubis. This state is noticed, if I recollect right, in one of the volumes of the Transactions of the Pathological Society of London. It is not easy to offer any explanation of such an occurrence, though I have sometimes thought it might arise from simple examination of the abdomen, instituted during life. For the causes which will give rise—in some cases of fever—to marks of pressure, ecchymosis, &c., may, I know, be of the most trivial description: and it seems scarcely carrying the idea too far to suppose that manual examination of the abdomen might, in certain cases, cause a large ecchymosis, like that which we are now speaking of.

Before concluding this essay, it may probably be expected that something should be said on the treatment of fevers attended with hemorrhage. Were I, however, to enter fully into this part of my subject, it would extend the essay beyond all reasonable limits; and I shall, therefore, confine myself to a few remarks of the most general character.

The preceding pages illustrate—I would hope amply—the fact that hemorrhages, in one form or other, are of frequent occurrence in the fevers of Dublin; and farther, that these hemorrhages are, in the great majority of instances, beneficial. The contemplation of these facts appears of the greatest moment. For it will be observed they are the doings of Nature, not of Art. They constitute a part, so to speak, of the natural progress of our fevers, and go on quite independent of interference on our side. It must be repeated, too, that, speaking generally, their effects are beneficial, often in the most marked way, of which many examples have been given in the preceding pages. Now, with such facts before us, what is the direct corollary which follows from them?—Can any reasonable deduction be made, which will tend to improve our treatment of these diseases? Clearly, that it is the part of the physician to imitate, it may be, or at least to second, the efforts of Nature; and that every endeavour should be made to attain that knowledge which will, at least, not thwart her. Hence follows the great and leading principle which I believe should guide us in by far the greater number of cases of fever in which hemorrhage occurs—that of non-interference: I mean an interference which would tend to check the hemorrhage directly. That cases do occur where we must step in, and do our

best to check bleeding, is certain. But such are the exceptional cases, not the rule.

In many instances, however, we are fully justified in acting so as to assist the bleeding. Thus, epistaxis may be encouraged, and often with the best results. Or again, cases are very common where but a few drops of blood may be lost from the nose; and here, by taking the hint, we can have no hesitation in the application of some leeches, proportioned in number to the demands of each individual case. I have never yet seen an instance where Nature led the way, and Art then came to her assistance, that the relief afforded was not of the most marked kind; and it is really curious what a small number of leeches will often answer the purpose; even so few as two, and to an adult, I have repeatedly ordered with advantage. These may have to be repeated, but it is the general principle only I am speaking of here.

There is another mode in which a kind of interference, in cases of epistaxis, of which I am now speaking, proves most salutary. I mean the use of aperients. It will often be found on inquiry that a confined state of the bowels is keeping up a bleeding, which it may be thought necessary to moderate. In such cases, aperients act often like magic, lessening not only the headach, which is so apt to attend such a state, but moderating also the bleeding, if not checking it entirely. In these ways, then, whilst we still keep to the rule of no direct interference, that is, in the great majority of instances, Art may step indirectly in, and be of the most essential service.

The remarks just made apply mainly to the first week of fever, though they may, with a proper discretion, be used later. As the disease goes on, however, and bleeding from the nose occurs at later stages of fever, there is then less occasion for interference. The amount of blood lost is generally, at this period, very small, and puts on more of the passive character. In such it is best met by wine and other stimulants; and this treatment is still more called for when bleeding occurs, as it may do, during convalescence.

Hæmorrhage from the chest is to be treated on the same principles as those indicated for epistaxis. Dry cupping is worthy of more general use than it receives; and, in suitable cases, blood may be taken in this way with marked advantage. Blisters, too, I have seen of use. The same remarks apply to bleeding, which is in direct connexion with pneumonia, of which instances have been already given.

Hæmorrhages from the bowels, occurring in fever, require more consideration than any of those just glanced at. For

here the loss of blood is often very considerable, so much so, as to affect seriously the vital functions; and, if allowed to go on, destroy life itself. Instances of this kind have been already given. In such there is nothing for it but endeavour to check it by all the means in our power. The medicines which appear to me most useful are the gallic acid and the oil of turpentine; either with or without a small quantity of opium or laudanum. I think I have seen decided benefit from both but especially from the latter^a. It may be given in ten-drop doses, frequently repeated, and in the form of emulsion. In those instances where the urgency is not so great, yet where the tendency to bleeding still continues, I have seen the turpentine, combined with castor-oil, act like a charm. Dr. George Kennedy is in the constant habit of using it in this way. One or two drachms of each, according to circumstances, are given in draught. Injections have not appeared to me as useful as might be expected, possibly because they do not reach that part of the bowel where the bleeding comes from.

Of uterine hemorrhages little need be said. If miscarriage be threatened, I believe it is next to useless to attempt to stop it. I have not witnessed any case where, when once threatened, it did not go on. I speak now of the earlier months of pregnancy; at a more advanced stage, however, as for instance at six or seven months, I have seen cases of threatened miscarriage, and yet it did not occur. If the bleeding be a pure hemorrhage, it will be treated on the same principles as bleeding from any other part of the frame, and of course only interfered with directly when it is to such an extent as to affect the vital functions. Lastly, if the bleeding be the natural function, it will not be interfered with, to check it, but may be encouraged with marked advantage.

To sum up, then, the principles which I believe should guide us when hemorrhage occurs in fevers, the following may be stated:—

1. That direct interference is the exception, not the rule.
2. That indirect interference, as by the means already alluded to, may be, and often is, most judicious and beneficial.
3. That direct interference is only justified where the hemorrhage is to such an extent as to affect the vital functions.

This concludes what I have at present to offer on the subject of hemorrhage in fevers. That the subject is exhausted

^a The treatment of general hemorrhages by turpentine is, of course, well known to all. The subject has been specially written upon by Copeland.

I cannot for a moment suppose. It is not possible for any one mind to grasp all. But this is no reason why each should not contribute to the amount of his opportunities. Enough, I trust, has been advanced to show that hemorrhage—as an event of frequent occurrence in fevers—is one of great extent and considerable importance. It will have been observed,—that it is not confined to any one class of fevers; that it is met with and without spots, in synochus and synocha, in essential, gastric, and typhoid fevers;—that it is common to all the exanthemata, as well as the complications, of the inflammatory type, so often met in these affections,—that whilst it is seen at every period of fever, its leading varieties would appear to be regulated by certain laws. Hence it is we may speak of one kind of hemorrhage—epistaxis—as being most usual at an early stage of fever; whilst another—the intestinal—may be described as a late symptom; and a third—the uterine—as occupying an intermediate position between both. These would appear to be important points to keep in mind, as influencing directly our diagnosis, prognosis, and treatment. It will have been observed further, that whilst by far the greater number of the hemorrhages take place from the mucous surfaces, they do not invariably do so, but that they may also be met on the surface of the body; and that the tendency—rather than the reality—to occur here, and even into the serous cavities, is of a very striking kind. In fact, petechiæ themselves may be considered, in this point of view, as but a part of that general tendency spoken of.

That the most of these hemorrhages are due, in part, to some great change in the vital fluid, for the time being, there would appear to be no reasonable doubt. The change, however, important though it be, constitutes but one link of that state which we denominate fever, still this link is a very obvious one, and the knowledge of the present day, more especially afforded by animal chemistry, is going to prove that the time is coming when we will most probably possess means to counteract the hemorrhagic tendency; and, in so far, to place the treatment of these cases on a surer basis than at present exists. Should this be attained, it is quite true we will be but carrying out the ideas of all the writers of the past century; with this difference, however, that their ideas of treatment were only theoretical, whilst ours would be founded on the immutable basis of facts; and as such would necessarily be permanent, and give us a step in advance, which would not again be lost.

Before closing these remarks I would notice a point al-

ready glanced at in the preceding pages: I mean the fact that when hemorrhage occurs in fevers, it is, in by much the greater number of instances, a beneficial process, and that even a comparatively large quantity of blood may be lost with advantage in cases where, and periods when, all our usual ideas on the subject would run the contrary way. Out of the 262 cases tabulated (which might now be added to) the deaths amounted to 27, that is, very nearly, 1 death in every 10 cases. Now this, at the very lowest calculation, allows 8 recoveries for 1 death, and, considering the great severity of many of these cases, this cannot be looked on as a large mortality. But, besides being beneficial in the majority of instances, these hemorrhages often prove critical, and, if I may so say, in two ways: first by directly moderating symptoms, and so reducing a fever which otherwise would affect life,—this is common; and secondly, by proving distinctly critical, as much so as any other process of the economy. Now with such facts, and they are incontestable, the question must force itself on us: Is our treatment of these cases of fever such as it ought to be? Is it not the tendency of the present day to eschew bloodletting in almost every form, though we have the plainest facts staring us in the face to the contrary? If Nature acts in one way, and acts so beneficially, can that treatment be the best which does not imitate her? Difficulties there no doubt are,—great difficulties,—but all medicine is made up of such, and would never have progressed at all had the plea of difficulty been listened to. But it must not be supposed that I am about to be an advocate for bleeding in fever, or indeed to speak at all on that point, though I know that, with common prudence, it is not the dangerous practice many think it^a: all I wish to convey is, that the questions stated above open up, to my own mind, a wide and as yet untrodden field for investigation, and that the path, if properly followed, may tend to improve the treatment of a certain class of cases of fever.

^a The late Dr. John Crampton, of this city, a most able practitioner in fever, used general bleeding largely in our common fevers. By largely I mean in a large number of cases.