manifests itself by giving a second impulse. The systole of the arteries here mentioned is caused by the elasticity of their walls(a). If their contractile powers should be brought into action by deranged nervous agency, the phenomena of local arterial pulsation, diastolic pulse, &c., can be explained. The single impulse of abdominal aneurism, therefore, may, I think, be justly referred to the combined and simultaneous action of the ventricular and arterial systole; while the occurrence of two sounds may be accounted for, the first and normal one by the entrance of the blood, the second, so rarely heard, by the egress, produced by an elastic state of the sac, an explanation which seems corroborated by the condition of the parts in the popliteal aneurism shown me by Mr. Wilmot, which was of the true form, not filled with fibrine, and certainly capable of reacting on its contents.

ART. XII. — *Observations on Hemorrhage*. By J. MOORE NELIGAN, M. D., M. R. I. A., Physician to Jervis-street Hospital, and Lecturer on the Practice of Medicine in the Dublin School of Medicine.

PROBABLY the most frequent symptom and consequence of organic disease is the occurrence of hemorrhage from the blood-vessels of the lungs, the stomach, or the intestines. Much stress is consequently laid upon it as a diagnostic mark of structural changes in these viscera, in the heart, and in the liver; and there can be no question but that, in doubtful cases, it often aids materially in leading to a just conclusion. Yet, valuable a symptom as it is it must be sometimes regarded and treated as

(a) With reference to the arterial systole, I have considered it as due to the elastic force only of the middle wall, called into play after its distention by the portion of the ventricular systole expended on it; but many circumstances induce me to agree with the opinions of Henle, Weber, and others who have demonstrated that a power of active contraction resides in the arterial wall, and which is due to the presence of muscular fibre.

a disease *per se*; and although such a view of hemorrhage cannot be looked upon as pathologically correct, therapeutically considered it often leads to the best results as regards treatment.

When hemorrhage to a moderate degree recurs at intervals, and is manifestly dependent on the existence of organic disease, it is, of course, most effectually controlled by the employment of remedies calculated to relieve the condition on which it depends; but when it takes place suddenly to any considerable extent, the immediate indication of checking it must be fulfilled by means more directly applied. It is in consequence of this that hemorrhage is so much more commonly treated as a disease than as a symptom, and that effectual plans for stopping it are so anxiously sought after.

Apart from direct injury, the most common cause of bleeding is congestion, and it therefore occurs generally from the surface of mucous membranes in which the venous system is much developed and liable to sudden alterations in the quantity of blood circulating there. Hematemesis, melæna, and hemoptysis, are consequently the forms under which symptomatic hemorrhage most frequently takes place; and it is by epistaxis, or by bleeding from hemorrhoids, that nature most commonly finds a means of relieving congestion not dependent on organic disease.

Hemorrhage from the mucous membrane of the digestive organs is sometimes the earliest symptom by which attention is directed to the existence of organic disease in the abdominal cavity; but it more usually takes place after more direct symptoms had been long previously recognised, and not uncommonly is the mode by which life is terminated in these affections. Under every circumstance it is highly alarming, and calls for the most prompt and energetic treatment. This is especially the case when it occurs in the form of hematemesis, as it is then with more difficulty controlled, and is more apt to recur, than when there is simply melæna; this seems to

depend on the size of the stomach compared with that of any of the intestines, permitting a much larger accumulation of blood in its cavity before it contracts on itself, which is evidently the natural mechanical method by which the bleeding is checked.

In the administration of remedies to stop the hemorrhage, the chief indication to be fulfilled is therefore manifestly to produce contraction of the stomach, whether the bleeding be symptomatic of organic disease or not. With this view we should be guided in the choice of styptics or astringents, and they should be administered in a concentrated form, or rather as little diluted as possible, so as not to distend the stomach. In hematemesis or melæna I place most reliance on oil of turpentine as a styptic, and on gallic acid as an astringent; the former, by its stimulant property, excites the stomach and intestines to contract, and the latter may be given in the solid form, and is very powerful in small doses. Ice has been often prescribed to check hemorrhage from the stomach; but its tendency, when dissolved, to distend the organ, and to favour further bleeding by diluting the blood that may have previously escaped from the vessels, constitutes, I think, a very serious objection to its employment. As to blood-letting, it is only admissible in those few cases where the hemorrhage seems to be dependent on general plethora, and even in these must be regarded rather in the light of after-treatment than of an immediate remedy.

The diet in all cases of hemorrhage from the stomach or intestines must be absolute. Nourishment should be given in a concentrated liquid form, perfectly cold, and in the smallest quantities at a time; and a return to the usual articles of diet should be permitted with the utmost caution.

The following case will illustrate more fully the most important points in practice which are above noticed. It is also an example of what may be termed the idiopathic form of gastro-intestinal hemorrhage, which sometimes occurs in per-

sons of a spare habit of body, apparently in the enjoyment of good health, and without any signs of the existence of organic disease.

Mr. D., aged 43, of middle height, rather slight make, and sallow complexion, subject to occasional laxity of the bowels for the last two years, but otherwise in the enjoyment of good health, was attacked on the 8th of April, 1849, with diarrhœa and vomiting; the evacuations were watery and attended with tormina, and the vomited fluid seemed to contain much bile. He could assign no cause for the attack. On the following morning, the 9th, he vomited blood, and also passed some by stool. He was now seen by Mr. Oldham, who prescribed acetate of lead and opium for him. On the third morning he was awoke at 6 o'clock, A. M., by a recurrence of the bloody vomiting, which was represented as having been very copious, amounting to more than a pint of pure blood, and he also passed some blood by stool immediately afterwards. On the same day, at half-past 4 o'clock, P. M., he was again attacked with vomiting and purging of blood; and at 6 o'clock, P. M., I saw him for the first time.

The blood which he had last vomited was shown to me; it was grumous, of a blackish-red colour, and amounted to a pint and a half; that passed by stool was nearly similar in appearance, somewhat darker coloured, amounted to two pints, and was totally unmixed with fecal matter. He was at this time exceedingly weak, and inclined to faint if he raised his head off the pillow; the whole surface of the body was blanched; the pulse intermittent, 120, very feeble and compressible, and dicrotous; the abdomen was tumid, pressure on it did not cause pain, but produced much borborygmus; the feet and hands were cold; and he complained of intense thirst. He was ordered to take immediately a draught consisting of thirty minims of oil of turpentine, a drachm of mucilage, and three drachms of water, and in an hour afterwards a pill containing two grains of gallic acid: the draught and pill to be repeated

alternately every hour. He was allowed to sip occasionally, but in very small quantity at a time, raspberry vinegar and ice-cold water, one part of the former to four of the latter; and a tea-spoonful of cold strong beef tea was directed to be given to him every ten or fifteen minutes. Hot jars were applied to his feet; and he was ordered to be kept as quiet as possible, and to remain in the recumbent position. I saw him again in six hours afterwards, when the pulse was 110, less intermittent, still dicrotous, but a little fuller; he had no return of the bloody vomiting or purging, had slept at intervals, and expressed himself now as feeling stronger. The draught and pills were directed to be continued, and the nourishment and drink as before.

April 11th, fourth day. At 6 o'clock, A. M., the vomiting and purging of blood both returned; the quantity was very much less, not exceeding altogether a pint and a half; it was also very much darker in colour. The pulse was 96, irregular, feeble, less compressible, and not dicrotous; the abdomen was soft and not tumid. He slept occasionally during the night, and felt much stronger. The cold beef tea was directed to be given in larger quantity and with greater frequency, but no other article of nourishment was allowed. The draughts and pills were ordered to be taken every third hour alternately. At 5 o'clock, P. M., the pulse was 84, improved in every respect; and there had been no return of the hemorrhage. The pills and draught were ordered to be continued as in the morning.

April 12th, fifth day. No return of the hemorrhage; he had slept several hours during the night, and had gained strength; the pulse was stronger and less compressible, 94. He was now allowed a more liberal diet, but everything was still directed to be taken cold. In the evening an enema consisting of two pints of tepid water was administered; it brought away some very dark grumous blood.

April 14th, seventh day. The bowels have not yet been

moved naturally; but he has gained much strength, and is able to sit up in bed for a short time. He was ordered two cathartic pills, consisting of seven grains of compound rhubarb pill and a grain of extract of hyoscyamus; and one of the gallic acid pills to be taken twice daily; the turpentine draughts to be omitted.

April 15th, eighth day. The pills not having operated, the tepid water enema was ordered to be repeated; it acted freely, the evacuations were dark, but contained much natural feculent matter.

April 16th, ninth day. Bowels moved naturally; gaining strength rapidly; sleeps well; appetite good; able to get up for some hours. All medicines were discontinued.

From this date he quickly regained his usual health, and has since remained quite well, nearly twelve months having elapsed; but he has not quite lost the blanched appearance consequent on the hemorrhage.

This seems to have been a case of simple hemorrhagic exhalation from the mucous membrane of the stomach. After the recovery of the patient I examined him with the greatest care, but could not detect any evidence of the existence of organic disease; and had any existed it is almost certain that, in the interval which has since elapsed, it would have been manifested by the occurrence of some of the ordinary symptoms. The quantity of blood lost was very great; from the account given me by the gentleman's wife, a highly intelligent lady, and from what I saw myself, it could not have been less than eight pints in the first three days of his illness. The efficacy of the plan of treatment adopted was proved by the rapidity with which the hemorrhage was checked, and by his ultimate recovery without any return of the bleeding.

I regard gallic acid as our most valuable astringent in hemorrhage from the mucous membrane of the digestive organs, from the uterus—in many cases of bleeding from which I have seen it prove of the greatest service, and from the urinary organs;

of the latter two interesting cases in which its efficacy was shown, are related by my colleague, Dr. J. S. Hughes, in this Journal(*a*). When the case I am now about to describe occurred, I was not aware of its decided effects in controlling hemorrhage from the stomach; I therefore trusted to oil of turpentine alone. It is an example of hematemesis dependent on organic disease of the liver, by which life was terminated in a few hours.

James Fletcher, aged 32, was admitted into Jervis-street Hospital, November 18th, 1843. It was stated that he had been suddenly attacked with vomiting of blood about an hour ago, it being now 4 o'clock, P. M., which had continued since almost without intermission. I saw him about half an hour afterwards; he was then very feeble, quite blanched, his voice reduced to a mere whisper, the extremities cold, and the pulse scarcely to be felt at the wrist. He had vomited nearly four pints of fluid blood since his admission, and it was now coming up almost continuously in mouthfuls. He was immediately ordered an ounce draught containing thirty minims of oil of turpentine and a drachm of mucilage, and one such to be repeated every fifteen minutes; hot jars to his feet, and sinapisms to his legs; and to be allowed to sip ice-cold water. The vomiting of blood was not in the least controlled, and he died about two hours after his admission. On *post mortem* examination, the liver was found in a very advanced state of cirrhosis, the spleen enormously enlarged, and large patches of the mucous membrane of the stomach congested with blood; but, as is usual in these cases, no rupture of any vessel could be discovered(*b*).

(*a*) New Series, vol. iii. p. 275; and present Number, p. 309.

(*b*) This was the first case of three which have fallen under my observation in which there were a much atrophied cirrhotic liver and an enlarged spleen, without any dropsical effusion into the abdominal cavity. Fletcher had been twice previously in Jervis-street Hospital under my care. On April the 10th, 1843, he was first admitted; he then stated that he had lived an

Hemorrhage from the lungs occurs most frequently as a consequence of tubercular disease; but it also takes place, and I think more frequently than is commonly believed, as the result of simple congestion. When it is caused by organic disease of the heart or of the abdominal viscera, the bleeding takes place most usually into the substance of the lungs, constituting pulmonary apoplexy; we may or may not have hemoptysis as an evidence of the latter, but when it does occur it is generally to a small extent.

Hemoptysis, from what I have termed simple congestion, is described by most writers as dependent on general plethora, or a superabundance of blood in the system, and it certainly does occur most frequently in individuals thus characterized; but I have seen it not unfrequently in persons of a spare and apparently anemic habit of body, who did not present the least trace of tubercular or other organic disease.

Its treatment when dependent on this cause is sufficiently

irregular life, working occasionally very closely at his trade, but always in the habit of tippling—drinking almost every day two or three glasses of raw whiskey, and getting drunk once every month or six weeks. He had never been ill so as to be confined to bed, but sometimes suffered from pain in his right side, and dyspeptic symptoms. At this date his ankles were œdematous, but only so in the evening; the swelling disappearing almost completely after the night's rest. The spleen was felt to be much enlarged, and the liver, which was very small, could, by careful manipulation, be distinguished as nodulated on the surface, the abdominal parietes being exceedingly thin and lax. I therefore diagnosed the case as one of cirrhosis, although the most marked symptom, according to the then received opinion, namely, ascites, was absent, and, moreover, the spleen was enlarged. He left the hospital in a week, as he said that he felt quite recovered; the only treatment adopted having been the administration of mild mercurial purgatives. He was readmitted on November 11th, having, according to his own account, spat up some blood that morning, but he left hospital the same evening. And his third admission was on the occasion narrated in the text.

The second case was that of a woman who died in the hospital a few days after her admission. She had cancer of the uterus, fatty heart, cirrhotic liver, and enlarged spleen. I could not learn anything of her previous history, but there was no dropsical effusion in the abdominal cavity at the

simple: local bleeding from the surface of the chest by cupping, or general blood-letting, the former of which I prefer in all cases; the administration of saline cathartics in active doses; rest, especially of the respiratory and vocal organs; and low diet for a few days.

I have met with several cases of this congestive hemoptysis, in which the bleeding continued to an alarming extent, the result of which has proved, now that some years have elapsed, that the hemorrhage was not caused by the presence of tubercles in the lungs. I cannot, therefore, but think that Louis was much in error when he made the following statement, which, if correct, would necessarily lead to a very unfavourable prognosis in every instance: "It is impossible, as it appears to me, not to admit that, with a few unfortunately too rare exceptions, hemoptysis, when at all severe, denotes tuberculous disease of the lungs"(a). In one instance, that of a medical friend, I have his own authority for stating, that more than twenty years have

time, nor did the *post mortem* appearance evidence that there ever had been any.

The third case was that of a stout man, aged apparently about 45, who was brought to the hospital from the steam-packet quay in a state of collapse, caused by exposure to cold on the deck of a steam-packet, on his passage from Liverpool on the preceding night. He died about an hour after his admission, and nothing could be learned of his previous history. The *post mortem* examination revealed a much cirrhotic liver, the gall-bladder containing many gall-stones, and an enlarged spleen, but no traces of peritoneal dropsy.

Casts of both liver and spleen of the first and last cases are in the Museum of the Dublin School of Medicine.

My friend Dr. Lyons has recently exhibited before the Pathological Society of Dublin, a specimen of cirrhosis of the liver with enlarged spleen, which he found in a male subject in the dissecting-room, in whom there were no traces of ascites. This was the second instance that had come under his observation: the details of the first were inserted in the Dublin Medical Press in last December. In both an attempt had been made to establish a collateral circulation; in the former by the rachidian sinuses and the vena azygos, and in the latter by the diaphragmatic veins.

(a) Louis on Phthisis, Sydenham Society's edition, p. 168.

now elapsed since he suffered from an attack of severe and protracted hemoptysis, and that he has never had the least symptom of the presence of tubercles in the lungs: he is at present in the enjoyment of the most robust health.

An illustrative example of this form of hemoptysis occurred in my practice about three years since. A gentleman, aged 20, who had been for some years an hospital pupil of mine, rushed hastily into my study, and showing me his pocket handkerchief, which was dyed with red blood, said that, while walking quietly along the street, he suddenly felt a tickling in his throat which compelled him to cough, and on expectorating he perceived that he spat up pure blood; the cough and hemoptysis continued, and before he reached my house, a period of time which could not have exceeded ten minutes, he conjectured that he must have expectorated at least six ounces of blood. He was blanched, evidently with terror, when he came to me, and the hemoptysis was then very profuse; his pulse was full and hurried, and his respiration quick. On examining his chest, a coarse gurgling rhoncus was to be heard in the large bronchial tubes, but there was not the least dulness on percussion, and the vesicular respiration was healthy; he had never previously suffered from cough. He stated that latterly he had been leading a sedentary life, indulging rather freely, and smoking somewhat to excess, and that within the last few months he had grown very full. I immediately had sixteen ounces of blood abstracted by cupping over the surface of the chest; and directed him to take an active saline cathartic draught, containing sulphate of magnesia and dilute sulphuric acid. The hemoptysis quite ceased in the course of that evening, and has never since returned; he is now an assistant-surgeon in the army, and in the enjoyment of excellent health. The only further directions given to him at the time of the attack were to live low for some days, avoid every cause of excitement, and keep the bowels acting by the occasional use of the draught that had been ordered for him.

Hemorrhage from the back of the pharynx may be mistaken for the hemoptysis of congestion of the lung, and the throat should therefore be carefully examined in every case of spitting of blood. A lady whom, for some years back, I have occasionally attended for relaxed sore throat, with follicular enlargement of the pharynx and tonsils, has suffered at three different periods from hemorrhage from the throat. The first attack that I witnessed occurred about two years since, and was evidently caused by walking for some time *against* a cold north-east wind. The bleeding lasted for several hours; and on examining the pharynx with the mouth speculum, I could see the blood trickling from the surface. Irritating the epiglottis as it flowed downwards, it was brought up with a cough, and, being of a florid colour, the case might be easily mistaken for one of hemoptysis. The hemorrhage was readily checked on this and on a subsequent occasion, when it was apparently produced by a similar cause, by the application of a solution of nitrate of silver, containing a drachm of the salt to the ounce of distilled water.

Hemoptysis, when dependent on tubercular disease of the lungs, is, in most cases, an early symptom, especially when it occurs to any extent; yet it not unfrequently takes place subsequently to softening, but the bleeding is then very rarely excessive. The reasons for these facts are so well known that I need not here enter into any account of them. It seldom proves fatal in phthisis, although it is often very alarming; but as it tends to weaken the patient much, and thus render the further progress of the disease more rapid, it is an object of importance with the physician to check the bleeding as quickly as possible. The treatment to be adopted while the hemorrhage is going on is sufficiently simple, but there is a practice very commonly adopted, and which bears the sanction of many eminent names, that I think cannot be too much condemned; I refer to the application of cold externally to the surface of the chest: the injurious effect it must produce, by causing a de-

termination of blood to the internal organs, is sufficiently manifest. General or local blood-letting is admissible in but very few cases,—those in which there is evident plethora of the entire circulating system.

The plan of treatment which I have found most successful is the following: the patient should be placed in a cool bed, with the shoulders well raised, and in warm weather near an open window; the vegetable refrigerant astringents freely administered; acidulated saline cathartics prescribed; and the surface of the chest *dry-cupped*. The strictest quiet must be enjoined, and the least exertion of the voice prohibited. The following case of phthisical hemoptysis,—the severest, as regards the quantity of blood lost, that I have ever witnessed,—will illustrate these remarks. It was reported by Mr. Fitzgibbon.

Bridget Brannagan, aged 36, a servant, was admitted into Jervis-street Hospital, November 5, 1849. She had suffered for some time from cough, pain in the side, shortness of breath, and occasional fits of impending suffocation. On this day, while working very hard, washing clothes, she was suddenly seized with an attack of difficulty of breathing and spasmodic cough, which ended in the expectoration of florid frothy blood: what was first spat up she says was black. The bloody expectoration, with a short cough, has continued without intermission for some hours; the quantity of blood lost, according to the account of her friends, amounting to nearly six basinfuls. On admission it is reported that her countenance was blanched, haggard-looking, and anxious, her forehead covered with a cold clammy perspiration, and her pulse weak and tremulous, scarcely to be felt at the wrist. She was at once placed in bed with the shoulders well elevated, and heaters were applied to her feet. Mr. Magrath, the resident apothecary, ordered her a mixture containing acetate of lead and acetum opii.

On the next morning I saw her for the first time; the hemoptysis continued throughout the night without intermission, and the quantity of blood expectorated very nearly filled a

large wash-hand basin ; it was frothy, and of a bright florid colour. The entire surface of the body was bloodless, icy cold, and covered with clammy perspiration ; the voice was low and whispering, scarcely to be heard ; and the prostration was extreme. The pulse could not be felt at the wrist ; in the carotids it was dicrotous, irregularly intermittent, 120 in the minute. She was ordered to take an ounce, every hour, of a mixture containing two ounces of distilled vinegar, an ounce of treacle syrup, and five ounces of water ; and the surface of the body and extremities were directed to be kept warm.

On the third day it was reported that the hemoptysis had been gradually decreasing since the previous evening ; the pulse could be felt at the wrist, and the surface of the body was warm. On examining the chest, there were physical signs evidencing tubercular consolidation beneath the right clavicle, and in the left dorsal region. She was ordered to be dry-cupped over the chest anteriorly and posteriorly, the mixture to be continued, and a cathartic draught, containing sulphate of magnesia and dilute sulphuric acid, administered.

From this time she gradually improved,—the hemoptysis having quite ceased on the fourth evening,—until the seventh day after her admission, when she was attacked with pleuritic stitches, vomiting, and a return of the hemoptysis, but not at all to the same extent as before. The mixture was again repeated, with the addition of a drop of creasote every second hour, the dry-cupping again applied, and the acidulated saline cathartic as before administered. To this treatment the symptoms yielded at once, and the hemoptysis did not again return while she was in hospital, which she did not leave until December 9, having suffered from the ordinary symptoms of phthisis, especially hectic and colliquative sweats.

When the bleeding takes place into the substance of the lung, it generally gives rise to the group of symptoms denominated pulmonary apoplexy ; this, as I have before said, may or may not be attended with hemoptysis. It is usually a conse-

quence of organic disease of the left side of the heart, which produces engorgement of the blood-vessels of the lungs, giving rise to dropsical effusions in the old, the broken-down, and the debilitated, and to hæmorrhage in the young, the strong, and the plethoric. I have, however, frequently seen this disease occur in individuals who had no organic disease, in whom it was, apparently, produced by cold, over-exertion, or any other cause which might produce congestion of the pulmonary vessels. This form of hæmorrhage very rarely proves as suddenly fatal as cerebral apoplexy sometimes does; I have been able to find only two cases on record in which it did so; but I have recently seen an instance in which immediate death was caused by it, as far as could be judged from the symptoms, there having been no examination after death. This was the case of a young married lady, nineteen years of age, who had been always, as I was informed, in the enjoyment of excellent health; she had been four months married, and had aborted a month previously, the abortion being attended with much hæmorrhage, which weakened her exceedingly, so that she had not left her room until the evening of her death. She spent that evening in the drawing-room with her family, in the enjoyment of restored health, and in the highest spirits; she sang a great deal, being the first time she had exerted her voice since her illness, but did not complain of fatigue. On retiring to her bed-room she sat down at the fire talking to her husband, when she suddenly complained of feeling weak. He immediately placed her on the bed, when she gave a few convulsive sobs and never moved afterwards. I was immediately sent for, and saw her in about twenty minutes; the surface of the body was then nearly cold, and very pale, and the mouth was partly filled with frothy bloody serum. I opened the jugular vein, from which about a drachm of blood flowed; but she was at this time quite dead.

As regards the treatment of pulmonary apoplexy, I have not any new facts to offer. The plan I have found most suc-

cessful will be best illustrated by the narration of a few cases. The first is especially interesting from the fact that the man was twice under treatment; on the second occasion he succumbed to the disease shortly after admission into the hospital, and the appearances presented by the partially absorbed clots of the first attack were well exhibited, and proved the correctness of the diagnosis then made. The case was reported by Mr. Farmer.

Charles Farrell, aged 34, by occupation a dealer, was admitted into Jervis-street Hospital, June 17th, 1845, affected with spitting of blood, accompanied by intense pain in the lower part of the right side. He states that the hemoptysis commenced three days ago, and has continued since, but not to any extent, not more than a cupful of blood being spat up daily. The pain is of a dull character, but severe, yet little aggravated by taking a deep inspiration; he cannot ascribe his illness to any particular cause, except his having had inflammation of the lungs about six months ago, from which he never recovered completely. There was no fever about him; the surface of the body was cool, and the pulse 84, compressible; but he was dull and heavy, answering slowly and stupidly the questions put to him. On examining the chest, well-marked dulness was audible over the middle of the right dorsal region, in which part the respiration was feeble, and accompanied by a coarse crepitant ronchus, not regular or constant. The sputa, which consisted almost entirely of blood, adhered to the sides of the spitting-cup.

The disease was diagnosed to be pulmonary apoplexy. He was ordered to be cupped to sixteen ounces from the dorsal regions of the chest, and to take a pill containing two grains of calomel and a fourth of a grain of opium night and morning.

June 22nd, fifth day from admission. There has been a gradual improvement in all his symptoms, and the quantity of blood in the sputa is very much diminished. A blister was applied to the right side.

On the sixth day the blood had nearly disappeared from the sputa; the cough was less troublesome; and all the physical signs, except the dulness on percussion, were much diminished: he was slightly salivated. The pills were directed to be omitted, and the blistered surface to be dressed with mercurial ointment.

July 1st, fifteenth day. He was discharged from the hospital. The hemoptysis had quite ceased for some days, but there was still some dulness on percussion, with bronchial respiration and weak vesicular murmur over the right dorsal region.

This patient was re-admitted on the 26th of November following. He was partly unconscious, and, from the account given by his wife, who accompanied him, it appeared that he remained well, except occasional cough, but no hemoptysis, until two days since, when he suddenly became insensible after having spat up about a cupful of blood. The vesicular respiration was very feeble in every part of the chest; there was a general coarse mucous ronchus; and over the left scapular region there were complete dulness on percussion and bronchial respiration. The dulness over the right lung, where it had existed when he was previously in hospital was now very trifling. The same treatment was used as when he was formerly in the hospital, but he died in a little more than forty-eight hours after admission.

On examination after death the bronchial tubes of both lungs were found to be filled with frothy bloody serum; the superior posterior portion of the lower lobe of the left lung contained a recent apoplectic clot of blood as large as a man's fist, and there were three smaller clots in the lower posterior part of the upper lobe. In the right lung the upper portion of the lower and the inferior portion of the middle lobes contained each in their posterior part, the remains of large clots which had partially undergone absorption. They were of a reddish-

yellow colour on their circumference, dark red in the centre; the lung surrounding them was apparently sound. The heart and other viscera were in a perfectly healthy condition.

This case differed in many respects from most others that I have seen, but especially in the extent to which the hemoptysis occurred, and in the absence of unconsciousness in the first attack, which I believe depended on the blood escaping outwardly through the bronchial tubes. The other general symptoms and the physical signs were, however, so well marked as to prevent any difficulty in the diagnosis. The following is an example of the more ordinary form in which the disease is presented to the physician. It was reported by Mr. George C. Cotter.

James Bell, aged 30, was brought to Jervis-street Hospital November 23, 1847, in an insensible state; the extremities cold, and the pulse scarcely to be felt at the wrist. The persons who brought him in stated that he had been found lying on the Drogheda Railway, on which he was a labourer, and that they knew nothing of him, but supposed he had been bruised between two trucks. He was consequently admitted into the accident ward, under the care of Mr. Power, the surgeon on duty, and the usual remedies having been applied to restore animation, after some perseverance circulation was re-established in the extremities, when some consciousness quickly returned. He was, however, unable to give any information as to what had happened to him, but was positive that he had received no injury of any description. He mentioned, however, that he had been suffering from a slight cold for two days, and that during a part of each day he slept on the top of a truck in the open air, exposed to the inclemency of the weather, which was at this time very severe. There being no evidence of any injury after the most careful examination, the patient was transferred to the medical wards on the next day.

His countenance was at this time pallid and indicative of distress; the pulse very small, weak, and compressible, 80; the

breathing short, but not hurried; and morbid heat of the whole surface of the body. On making a stethoscopic examination, the following physical signs were manifested; puerile respiration in the sub-clavicular region of the left side, extending over more than half of the anterior surface of the chest; some dullness on percussion in the mammary, and complete dullness in the lateral and dorsal regions of the same side, with absence of respiratory murmur and bronchial respiration. The sounds of the right side were normal, both on percussion and auscultation. It was evident that he expanded the right side of the chest more than the left during each inspiration. There is no cough, but early this morning he expectorated one small coagulum of black blood. Previously to my seeing him, some leeches, and afterwards a small blister, had been applied to the left side. He was now ordered six ounces of wine, and to be dry-cupped over the whole of the left lung, except where the surface was sore from the blister.

November 25th, third day. He appears to suffer less; the breathing is more prolonged, twenty in the minute; the pulse still weak, 80; the tongue brown in the centre and white at the edges and tip; the face flushed. The vesicular murmur has in some degree returned in the left inferior dorsal region, but it still sounds dull on percussion. The right lung is somewhat affected to-day, sounding somewhat dull in the inferior lateral region, with an indistinct crepitant ronchus where the dullness ceases. He complains of pain in the left side; but he has not the least cough. Ordered to take, every six hours, a pill containing two grains of calomel, and a third of a grain of opium; the wine to be repeated.

November 26th, fourth day. Much improved; the pulse has regained its strength, and the breathing is full, 17 in the minute; the vesicular murmur is still very feeble in the parts before noticed, but there is rather more resonance on percussion. A large blister was ordered to be applied to the right side, and the pills to be continued. To have full diet.

November 29th, seventh day. It is reported that the patient is improved in every respect. He has been up for the last two days; the vesicular respiration is rather more distinct, but the dulness still exists; he is slightly under the influence of mercury; the pills were ordered to be discontinued.

December 1st, ninth day. He was discharged from hospital to-day, as he said that he felt quite well and able to work. There is still dulness, and some bronchial respiration over the left dorsal region.

In this case the hemorrhage into the lung, and the consequent pulmonary apoplexy, which was so well marked, seems to have been caused by prolonged exposure to cold; for there was not the least indication of organic disease of the heart.

The following is an example of the same affection produced by a violent strain:

Richard Tuite, aged 40, a labourer, was admitted into Jervis-street Hospital, November 17th, 1849. He states that as he was carrying a deal plank on his left shoulder up an inclined plane, on the 8th instant, in the Custom House Yard, his foot slipped, and, in endeavouring to save himself from the plank, which fell off his shoulder, he got a severe strain of his left side. He was taken up in a state of insensibility, but revived in a few minutes on the application of cold water to his face and chest; he suffered severely from difficult breathing and pain in the side for the next four days, so much so as to confine him to bed, and on the fifth day he began to spit blood of a dark colour, and in clots. He has been in the army, and served several years in India; while there he was profusely salivated for disease of the liver, and for chronic rheumatism: for the latter disease he was discharged from the service.

On admission into hospital his face and head were congested, his lips livid, and eyes suffused; he complained of great debility and loss of appetite. The respiration was slow and laborious; the pulse feeble, compressible, 80. Altogether he presented the appearance of a person in whom reaction was

not fully established after an accident. Percussion elicited a dull sound over the axillary region, and over the adjacent parts of the mammary and dorsal regions, of the left side. In these parts the vesicular respiration was absent, but bronchial respiration and bronchophony were distinctly marked; there was puerile respiration in the other portions of the left lung; the sounds in the right side were normal. The expectoration was rather scanty; it consisted of a very adhesive bloody mucus. He was ordered to take a pill containing two grains of calomel and a fourth of a grain of opium every sixth hour; and to be dry-cupped over the left side of the chest. This man improved rapidly: on the third day after his admission a blister was applied to the side, and the blistered surface was dressed with mercurial ointment; on the fifth day he was slightly salivated, when the pills were omitted; and on the tenth day he was discharged at his own request, as he felt quite well. Dulness on percussion, and bronchial respiration were, however, still audible in the same parts as before, but to a less extent, and not so well marked.

Before concluding these observations, I wish to notice another form of hemorrhage, namely, that which occurs in individuals of what is termed the hemorrhagic diathesis, which so invariably proves fatal, and of which we know so little, either of the pathology, causation, or treatment. I refer to it at present more with the view of adding an additional case to those already on record than of proposing any theory regarding it. I believe it to be an aggravated form of purpura, in which the blood transudes freely through the mucous membranes, instead of being effused beneath them or the skin, as in that disease; and from my experience of the cases of it—but few in number, however—which I have seen, I do not think the plan of treatment by large purgative doses of oil of turpentine, which I found to be so useful in purpura hæmorrhagica(*a*), is appli-

(*a*) Dublin Journal of Medical Science, First Series, vol. xxviii. p. 189.

cable to this form. The following case was reported by Mr. J. E. Dias.

Ellen Seery, a servant, aged 18, was admitted into Jervis-street Hospital, November 8, 1847. She states that about a month since, while standing at the kitchen fire in the evening, she was suddenly seized with pain in the back, stomach, and head, when she became insensible, and remained so for some minutes; the pain continuing in her head for more than an hour. She then fell asleep, and awoke in the morning quite well. In a week afterwards she was again attacked with pain in her head and back, which was followed by bleeding from the nose and gums, but as it did not prevent her from working, she did not seek for medical advice until the present, when she was compelled to do so from extreme debility, which has been daily becoming worse, the bleeding having continued for the last three weeks. Her menses have been perfectly regular. She never heard that any of her family had been subject to hemorrhages.

On admission, she was exceedingly feeble; the surface of the body completely blanched, the lips even being quite pallid; and she was inclined to faint on the least exertion. The pulse was very small and compressible, 90, not dicrotous. The respiration hurried, and the voice weak. There was a continued oozing of blood from the nostrils and from the gums; the latter, when wiped quite dry, were, in a few seconds, covered with black blood, which could be seen to exude from innumerable points, and when left to herself she was almost constantly removing clots of blood from them with her fingers. Her appetite was bad, and her bowels had been confined for the last three days. She was ordered a draught, containing half an ounce of sulphate of magnesia in two ounces of the acid infusion of roses; and to have strong beef-tea constantly. The next day the bleeding from the nostrils ceased, but seemed to be rather more copious from the gums. She was ordered to use a concentrated solution of alum as a gargle; and there be-

ing extreme debility, and a constant tendency to faint, to have four ounces of red wine and a tumbler of porter; the latter at her own request.

On the fourth day after her admission, November 12th, the bleeding did not seem to be in the least degree checked; it was only from the gums, in which there could not be discovered the slightest abrasion. The debility was very great, the pulse dictrotous, 90, feeble and compressible. She was ordered to take, every second hour, a draught containing half a drachm of oil of turpentine, half a drachm of mucilage, and two ounces of water; and to have six ounces of red wine. This treatment was continued until the eighth day after admission, November 16th, with but little apparent effect on the hemorrhage from the gums; the debility was increasing, and she now complained of tinnitus aurium. A mixture was prescribed for her, containing twelve grains of acetate of lead, a fluid drachm of acetum opii, seven ounces and a half of distilled water, and half an ounce of syrup, of which an ounce was to be taken every second hour. A solution of nitrate of silver, ten grains to the ounce of distilled water, was ordered to be applied freely to the gums; and the wine was increased to eight ounces in the twenty-four hours.

November 17th, ninth day. Bleeding not lessened; the stomach has been constantly sick since the administration of the mixture was commenced. It was omitted, and a draught containing four grains of gallic acid, suspended by means of mucilage in an ounce of water was prescribed, to be taken every second hour; she was allowed the saline mixture in a state of effervescence with lemon-juice, to allay her thirst, which was extreme.

November 18th, tenth day. Bleeding unchecked, and not in the least influenced by the nitrate of silver, which was applied in the solid form to the gums. Some spots of purpura are visible on the chest and arms, and the debility is daily becoming more extreme. On the eleventh day, as the stomach rejected the draughts containing the gallic acid, it was given

in the same doses in the form of pill, and a turpentine enema was administered.

November 20th, twelfth day. Hemorrhage continued constantly. Ruspini's styptic was applied to the gums, and folds of lint wet with it were placed between them and the inside of the cheeks, but without the least effect on the bleeding, which exudes just as freely as on the day of her admission. In the evening she was evidently sinking, and she died in the course of the next day.

After death, the body presented a perfectly bloodless appearance, so much so that there was not the least sanguineous engorgement of the depending parts even twenty-four hours after life had been extinct, when the examination was made. Here and there a few spots of purpura were scattered over the surface. On cutting through the integuments of the thorax and abdomen, the muscles exhibited a bright red colour, and were thickly coated with fat; proving that there was no connexion between this disease and scurvy, which was then prevalent in the city. All the internal organs presented a perfectly healthy aspect, except the left lung and the heart, which were thickly dotted over with spots of purpura. On the heart some of the spots were of the size of a pea, extremely dark in colour, but most of them were florid red, about the size of a pin's head.

This case differs in many respects from most of those that have been recorded, in which a fatal result followed from idiopathic hemorrhage. There was in it no evidence of the existence of a hemorrhagic diathesis until about three weeks before her death; and from details obtained from her friends it appeared that none of her relatives, either by the father or mother's side, had been liable to hemorrhage in any form. From the prevalence of scurvy in this city at the time, it was believed by many who saw the case that it was a form of that disease; but this opinion was contradicted by the manifest difference between the symptoms and those of scorbutic patients then in

the hospital,—as especially marked by the condition of the gums, the absence of blotches of blood on the surface of the body, by the appearances presented after death, and by the fact that the girl had not been exposed to any of the causes by which the epidemic of scurvy was produced.

It must be admitted that we know but little of the causation or pathology of hemorrhage of the character of that which occurred in this last example. It is a rare form, and light can be thrown on it only by the accumulation of cases; with which view, as I have before remarked, I now publish it. The same observation applies to the treatment; but I think it may be concluded, that any remedies, to prove effectual, must be had recourse to in the very commencement of the disease; for it would appear that when once the capillary circulation of the mucous membrane acquires the habit, so to say, of permitting the transudation of the blood, the difficulty of checking the hemorrhage is much increased.