distended with blood, and, upon opening the thorax, the lungs were found completely filling the chest, not in the slightest degree collapsed, and presenting the appearances characteristic of general pulmonary emphysema already noticed. The cranium was not examined.

In all these cases the cough had suddenly become much aggravated, and in the two which I saw before death, the extreme difficulty of breathing was first noticed after a more than usually severe paroxysm of coughing. The peculiar description of dyspnoea, inspiration, and expiration being equally difficult, as well as the circumstances connected with the symptoms which immediately preceded death, when considered in conjunction with the state in which the lungs were found upon examination, appear to me to warrant the conclusion that the sudden supervention of this general emphysematous condition of the lungs was the cause of death, and that this injury was the result of the violent paroxysms of coughing. Upon comparing the symptoms which occurred in these cases with those which precede death in cases of acute bronchitis, pneumonia, pulmonary apoplexy, and croup, a marked difference will be observed. In the last stage of acute bronchitis inspiration is difficult, the usual quantity of air not being admitted into the lungs, and expiration is more forcible than in the natural condition of this function; but this does not in the least resemble the dyspnoea depending upon emphysema. The pallid and frequently œdematous state of the face and general surface in the former affection, together with the coldness of the extremities, the absence of severe pain, and the half torpid condition in which the patient lies, are all circumstances widely different from those accompanying emphysema. Symptoms equally diagnostic in other affections of the chest might easily be adduced, or the stethoscope, which was not employed in either of the foregoing cases, would at once indicate the presence of emphysema.

The extent to which circulation within the chest is impeded by permanent dilatation of the air vesicles, or, according to the opinion of M. Prus, by general extravasation of air into the cellular texture of the lungs, when the whole of both lungs has become thus affected, may be readily conceived. Life cannot long continue when so much air remains in the lungs after each expiration, that only a very small quantity of venous blood can enter the lungs from the heart. The small proportion of venous blood which, under these circumstances, is allowed to pass into the lungs, appears to account for the redness of the face, so different from the pallid, livid, or leaden hue, which is usually observed at the close of other fatal diseases of the lungs. It may be as well to state that this brief notice refers exclusively to general emphysema of both lungs, and that it is communicated merely with the view of corroborating the opinion advanced by M. Prus, "that general pulmonary emphysema may cause sudden death."

ON
TUMOURS PRODUCED BY ENLARGEMENT
OF THE
EXTERNAL ABDOMINAL VEINS,
AND DEFENDANT ON DISEASE OF THE LIVER.

By THOMAS BEVILL PEACOCK, Esq.,

Pathologist to the Royal Infirmary, Edinburgh.

A varicose condition of the external abdominal veins, has fallen under the notice of most pathologists. Boyer* quotes from Severin a case in which a tumor existed in the hypogastrium, formed by the interlacement of enlarged veins, and states that he had himself seen one of a similar description. Reynaud† has detailed in the "Journal Hebdomadaire" the particulars of a case in which the varicose condition was traced to a cancerous growth, producing obliteration of the left iliac vein; and Cruveilhier mentions a somewhat similar instance in which the common iliac veins were obliterated by the pressure of an ovarian tumor, and gives a representation of the appearances presented in a case in which the umbilical vein was also found greatly distended, either from its canal never having been obliterated, or from its having again become pervious. With few exceptions, however, the cause giving rise to the dilated condition of the veins, has either not been ascertained, or has consisted, as in the cases of Reynaud and Cruveilhier, in some obstruction in the large venous trunks of the abdomen; and it is only very recently that Dr. Stokes,‡ in a communication to the Pathological Society of Dublin, drew the attention of the profession to this peculiarity, as present in some cases of ascites. Of the two cases referred to by Dr. Stokes, in one the varicose condition of the veins disappeared on the removal of the ascites, the other remained under treatment.

CASE I.—Philip Taylor, aged thirty-eight, following the occupation of a groom, and of very intemperate habits, first came under treatment in the Chester Infirmary, in January, 1838, in consequence of a kick from a horse; at this time he also laboured under some degree of jaundice, with œdema of the lower extremities, and slight ascites. From these symptoms he recovered in a short time, and resumed his employment, but it was not long before he again applied for relief; the anasarca had then become extreme, the legs being not only swollen, but exuding an ichorous secretion, and the jaundice being also more marked; in the epigastrium there existed a swelling, elastic and movable, under the integuments, which, when he was in the recumbent position, was smaller and less conspicuous, but became full and prominent on his standing up. Into this tumor a large vein passed up from the groin on each side, and these vessels by their union seemed to constitute its chief bulk, and then to pass down below the edges of the ribs. The veins coming from below were fully the size of the fore finger, and were remarkably contorted. The tumor was at least ten inches in diameter, and was

* *Traité des Maladies Chirurgicales*, t. 2, p. 280.

† Andral's *Pathological Anatomy*, Trans., vol. 2, p. 415; a second case, related by Reynaud, involving the cava and Portal veins, and attended with ascites, is referred to by Dr. Stokes, but I have not been able to see the original paper.

‡ *Dublin Journal*, vol. 20, p. 482.

situated below, and its centre somewhat to the right of, the zyphoid cartilage; being subjected to a mercurial and purgative course, the tumor became less in size, and the jaundice declined; he, however, went out, and resuming his usual habits, was shortly after readmitted in an apoplectic attack. From this he partially recovered, but complained much of pain on the right side; the jaundice became more intense; the tumor more distended; fluid accumulated to a large amount in the abdomen; and he sunk under a fresh attack of coma in February, 1839.

On examining the body, the parietes of the abdomen were found much loaded with fat; the tumor was less than during life, and proved, as had been anticipated, to consist of the union and numerous interlacings of the two large veins, proceeding from below, embedded in a dense cellular tissue; several of the venous branches in the tumor were of sufficient size readily to admit the point of the fore finger. From the upper part, large vessels passed out, entering the mediastinum, and communicating with branches of the internal mammary veins. The liver was extremely small, and exhibited the usual appearances of cirrhosis, being of a deep orange-brown colour, and studded over its surfaces, more especially on the under side, with small mammellated masses, varying from the size of a pea to that of a marble. Its inferior edge was thick and obtuse; on section, its texture resisted the knife, and was extremely firm; the surface exposed displayed a similar tuberoso appearance to the exterior, and the small masses were separated from each other by a paler membrane. The whole organ was remarkably free from blood, and weighed $37\frac{3}{4}$ ounces; the gall-bladder contained several small calculi, but the ducts were, throughout, unusually large; no obstruction was detected in any of the venous trunks, and the remaining viscera of the abdomen, and those of the thorax, were healthy, the heart only displaying some degree of hypertrophy, with dilatation of the left ventricle. The brain exhibited no sign of disease; several small masses of bone were embedded in the course of the longitudinal sinus.

CASE II.—Mwyndeg Thomas, aged forty-five, had formerly served in the navy, but latterly followed the occupation of a shoemaker, and was of intemperate habits. In January, 1840, he was admitted into the Chester Infirmary, and stated that he had been ill upwards of twelve months, and incapable of following his employment for eight; he was much emaciated and very weak; his complexion sallow, and the conjunctiva somewhat tinged; he complained of pain in the right hypochondrium, increased on pressure; the stools were pale; some fluid was detected in the abdomen, and the legs were swollen; his tongue was dry, and brown in the centre; the pulse quick and weak, and the hands tremulous. A tumor similar to that present in the last case existed in this; veins following the course of the external epigastric artery entered the tumor from below, and others passed out above, crossing over the thorax; the centre of the tumor was situated about midway between the zyphoid cartilage and the umbilicus, and to the left of the linea alba. No treatment to which he was subjected was attended with any marked benefit, the skin gradually became jaundiced; the ascites and œdema of the lower extremities increased; he suffered from occa-

sional attacks of hæmatemesis with pain in the head and delirium, gradually lapsing into coma, in which state he died in July.

The veins were found on examination, after freely anastomosing in the tumor, some to proceed over the chest, to communicate with the branches of the external mammary and intercostal veins; others to enter the mediastinum, and unite with the internal mammary veins. The internal epigastric veins were also greatly dilated, and were in connection with those of the tumor. The liver was small, weighing only 41 ounces, and its surface irregular, and covered with a thick layer of opaque membrane. A section displayed the characters of cirrhosis, though to a less degree than in the former case; nor was the organ so devoid of blood, being of its usual brown color. The gall-bladder and ducts were healthy, and the former distended with viscid bile; the spleen was very large, weighing $33\frac{1}{2}$ ounces, and firmer than natural; the kidneys were in an advanced state of granular degeneration, and the serous covering of the intestines showed marks of recent inflammation; the stomach contained much dark, grumous blood, from which the duodenum was entirely free; at the cardia the mucous membrane seemed denuded of its epithelium over a space about the size of a half crown, beneath which the vessels were turgid with fluid blood; the thoracic viscera were healthy, and the brain exhibited no sign of disease, with the exception of the bloodless state of its vessels, in which it corresponded with the rest of the system. No disease affecting the vena cava or its branches was detected.

REMARKS.

In both of the above cases it will be observed that the affection of the liver was of the same description, and as in neither was any obstruction detected in the large veins of the abdomen, the varicose tumors formed by the external veins must be traced to the state of the liver. That form of disease to which Laennec applied the term cirrhosis is, indeed, that in which the circulation is most impeded, and which might, therefore, be expected to give rise to this peculiarity. Dr. Carswell has shown, contrary to the opinions of Laennec, Andral, and Cruveilhier, that this affection depends upon the growth of a contractile fibrous tissue in the capsule of Glisson, surrounding the Portal vessels and lobules of the liver, and so compressing the organ, that in the advanced stages of the disease its bulk becomes greatly diminished, and its whole texture acquires an extreme degree of firmness, and is divided into irregularly shaped masses, containing a varying number of the ultimate lobules. In the above cases not only was the bulk of the organ much less than natural, but its weight was reduced from the average of 54 ounces* to $37\frac{3}{4}$ and

* The average here stated is calculated from the data given by Dr. Clendinning, in his paper on the "State of the Vital Organs in Chronic Diseases," contained in the twenty-fifth volume of the "Medico-Chirurgical Transactions." My own observations, founded, however, only on a small number of cases, would make the average somewhat higher. The average of 132 cases given by Dr. William Thomson, in his recent work on the Liver, cannot be adopted as a standard of comparison, since it includes the weights of several organs greatly beyond what is natural, and others taken from persons under twenty years of age.

41 ounces respectively. With the growth of the fibrous tissue the lobular divisions of the Portal veins are subjected to compression, and as the texture of the organ becomes divided into the small tumors, these press on the larger trunks, so that the circulation becomes greatly impeded. The veins are first distended; laminated clots are then deposited in their interior, and at length they become entirely obstructed, and the blood, returning from the viscera, is forced to seek other channels for its passage to the heart. Dr. Carswell has given a plate of a liver affected with the last stage of this disease, in which the hepatic branches of the vena porta and its trunk were filled with clots composed of blood, fibrine, and bile, and states that he has seen two other cases of the same description. Similar cases have fallen under the observation of Dr. Hope, and very recently I had the opportunity of examining a case of cirrhosis combined with medullary sarcoma, in which the Portal vein, for three or four inches, was obstructed by a laminated and decolorised clot, evidently of old date. Mr. Hodgson* states that he was informed by Dr. Farre that clots occasionally form in the smaller Portal branches in cases of chronic disease of the liver, and that he had since found them himself.

The cases of obliteration of the Portal veins, described by Dr. Carswell, do not appear to have been attended with any unusual degree of dilatation of the external veins—a symptom which, if present, could not have escaped his notice; nor did it exist in the case recently seen by myself. That the extreme degree of enlargement present in these cases should occur in so small a proportion of those in which the liver is affected with cirrhosis, must be ascribed to the more direct communication existing between the vena porta and vena cava than between the former vessel and the external venous trunks;† and as in both Dr. Stokes's cases, and in those just described, ascites was also present, it is probable that the pressure exerted by the fluid in the abdomen on the deep-seated vessels may have assisted in determining the blood to the external veins—a supposition which derives support from the circumstance that considerable dilatation of the veins of the abdominal parietes is present in most cases of ascites.

* "Treatise on the Diseases of the Arteries and Veins," note, p. 527.

† "In some cases of atrophy of the liver, and in cases in which the circulation through the liver has been for some time obstructed, a collateral circulation is established by means of the communications which take place between the capsular branches of the hepatic artery and Portal vein and those of the phrenic artery and vein."—Kiernan on the Anatomy and Physiology of the Liver—Phil. Trans., 1833, p. 733.

CARTILAGINOUS DISEASE, WITH PERFORATION OF THE STOMACH. TO THE EDITORS OF THE PROVINCIAL MEDICAL JOURNAL.

GENTLEMEN,—The accompanying case presents some peculiarities which may render it of general interest.

I understand from Mr. Lacey, of Newark, under whose care, and that of Dr. Morton, Mr. T. had

been for some years, that he never had any symptoms which would indicate the existence of so much disease in the stomach, as the post-mortem examination has revealed.

Mr. Lacey thus writes to me:—"In reply to your inquiry, he never had exhibited symptoms of diseased stomach; the pain of which he complained was directly across the abdomen and below the umbilicus, and more especially in the right inguinal region; but on the 19th of March he complained of pain through the upper part of the chest on the left side, which was removed by a few leeches, and a blister. After very careful examination of the abdomen both by Dr. Morton and myself, he never complained of pain or pressure over the region of the stomach or elsewhere, and said 'he could bear a blow to be given him without pain,' nor could we discover any irregularity of surface. The pain generally came on at night, and continued for some hours, and left him much enfeebled."

I have much pleasure in placing this case at your disposal if you think it worthy of publication, and beg to remain,

Your faithful servant,

GEORGE KENNION, M.D.

Physician to the Harrogate Bath Hospital.

On Friday, June 10, 1842, I was requested to see Mr. T., aged forty-nine, in consultation with my friend Mr. Parry, of this place. His appearance was somewhat emaciated, although not to any great extent; his countenance was anxious; the pulse 76, and languid; the tongue white and swollen, with a very slight yellow fur in the centre. His principal complaint was of extreme distension of the bowels, "as if he would burst;" there was no tenderness on pressure in any part of the abdomen; the bowels had been relieved in the course of the day, and the motions were reported as being very black and offensive; his urine was natural in appearance and quantity, and its healthy condition was confirmed by the ordinary tests. His appetite, was on the whole, good, and he never suffered any pain or inconvenience after eating, beyond that arising from the flatulence.

I found upon inquiry, that he had been more or less out of health for some years, but without any leading or any tangible symptom, until about six months ago, when he received a violent shock in consequence of the sudden death of a near relative. Since that time he has been considerably worse; the leading symptom has consisted of the frequent recurrence of paroxysms of intense pain, generally coming on at night, and referred almost entirely to the umbilical and hypogastric regions; these paroxysms were always connected with a great degree of flatulent distension, and generally passed off with the discharge of flatus. The pain, however, was so violent, and returned so frequently, that for many months he has not known, I believe, what it was to have three hours of continuous sleep.

Under these circumstances, he came to Harrogate about the 1st of June, where he had found great relief on former occasions, when out of health. He drank the sulphuretted waters at first for some days, without any medical advice; but not receiving any benefit, he called in the assistance of Mr. Parry, who, finding the biliary secretions and the whole digestive