truded forwards under the deep muscles of the spine, forming three distinct abscesses pressing against the pharynx; that on the right side had made its way downwards for more than an inch between the bones and muscles. The odontoid process was completely detached on all sides, and stripped of cartilage and synovial membrane, it was immersed in pus. The perpendicular, oblique, and transverse ligaments had altogether disappeared, and the odontoid process was only separated from the spinal marrow by the thickened sheath of that organ. All the joints enumerated, including those of the odontoid process, appeared to be engaged in one suppurating surface.

The fibrous sheath of the medulla oblongata, and commencement of the spinal marrow, were much thickened in texture, and the arachnoid and pia mater to the same extent were red and swollen, but the roots of the nerves were all perfect, and the medullary texture did not exhibit any organic lesion. The latter was perhaps a little softened, but had not undergone any alteration of colour; I say a *little* softened, because, as Dr. Houston remarked, in the healthy state this part of the spinal marrow feels more resisting than any other, and in this instance it yielded most easily to pressure with the finger.

The entire, which has been most carefully prepared by Dr. Houston, may now be seen in the Museum of the College of Surgeons.

ART. VI.—*History of a Case of Extensive Carcinomatous Disease*. By ROBERT W. SMITH, A. M., M. R. I. A., Lecturer on Surgery at the Richmond Hospital School of Medicine, &c. &c.

CATHERINE WAKEFIELD, æt. 30, admitted into the Richmond Hospital, March 2nd, 1837, under the care of Mr. Adams, labouring under carcimona of the lymphatic glands in the right axilla. About twelve months previous to her admission, she noticed in the above-mentioned situation a small tumour, hard,

moveable, and free from pain. A few months afterwards the right shoulder became swollen, painful, and tender to the touch : a number of small, hard, pale tubercles developed themselves in the integuments upon the right side of the chest and neck ; and the pain and swelling of the shoulder extended down the arm and forearm : her general health now declined, and her complexion became sallow. At the time of her admission into the hospital, the mammary gland did not appear to be implicated in the disease ; but the posterior wall of the axilla was occupied at its lower part by a tumour of stony hardness, irregular and knotty upon its surface, and extremely tender to the touch ; and the integuments of the axilla and shoulder, the right side of the chest and neck, were thickly studded with the small tubercles already mentioned. Shortly after the patient was admitted, however, the breast itself became engaged ; the entire gland became the seat of a hard, painful swelling : the nipple was not at any time much retracted ; but the skin around it presented numerous little hard grains or tubercles. At length the integuments over the tumour in the axilla became livid, and finally ulcerated. The arm was seized with exquisite pain, and became œdematous to such a degree, that the pulse was not distinguishable in the radial, nor even in the brachial artery ; and towards the close of her life, the upper part of the arm became ecchymosed ; large vesications containing a dark serum formed, and gangrene evidently impended. About a fortnight after the woman was admitted, she was attacked with symptoms of gastritis ; vomiting of green fluid ; tenderness of the epigastrium ; desire for cold drinks, and inability to retain them for more than a few moments ; the tongue was red and dry ; the abdomen was slightly tender upon pressure ; the skin hot ; the feet cold ; the pulse 100, small and weak. This attack lasted for about a week, and was followed by a series of very anomalous symptoms. She ceased to complain of pain ; did not notice any thing that occurred about her ; in fact, consciousness appeared to have been lost ; the eyes were fixed ; the pupils

insensible to the stimulus of light; and, as in catalepsy, the arm and hands would remain in any position in which they were placed. At this period of her illness, her bowels became obstinately constipated, and continued so for ten or twelve days; at the end of which period, jaundice set in, and the alvine discharge presented the appearance usual in that disease. Shortly after the occurrence of the jaundice, she gradually sunk, and for a day or two before her death remained in a comatose condition.

The *post mortem* examination in this case, proved exceedingly interesting; inasmuch as it very satisfactorily explained the greater number of the symptoms. Upon opening the chest, the right lung was found closely adherent throughout its whole extent to the side of the thorax: in every other respect the contents of that cavity were normal. Such, however, was not the case with regard to the abdominal and pelvic viscera: the peritoneum was inflamed, and here and there lymph had been effused. The ovaries (each of them nearly as large as an orange) were changed into a scirrhus structure of a yellowish white colour; they compressed the rectum to such a degree that the little finger could scarcely be passed through it. The lining membrane of the intestine, below the compressed portion, was intensely vascular and inflamed: while above the ovarian tumours, it was remarkably pale and covered with the peculiar clay-coloured feculent matter, usually present in jaundice. The glands along the abdominal aorta were enlarged and indurated; the gall bladder, distended with green bile, had passed down several inches below the edge of the liver; the hepatic, cystic, and upper portion of the common duct were likewise greatly distended. The pancreas was slightly enlarged, and converted into a true scirrhus structure, in which the lobules of the gland could not be distinguished: the enlargement engaged chiefly its right extremity, which had surrounded and compressed the termination of the ductus communis to such a degree as to cause its almost total obliteration. The axillary and brachial

veins were dilated ; and the blood was firmly coagulated in them throughout the greater part of their extent : both roots of the median nerve, where the brachial artery passed between them, were enlarged and indurated. The tumours thus formed were oblong, and about one inch and a half in length, and must have compressed the artery to a certain extent. The breast presented the usual appearance of scirrhus of that organ, with the exception that the fibrous bands were not very well marked. The head was not examined, owing to what cause I do not at present recollect. It is much to be regretted, as in all probability disease would have been found, and some explanation afforded of the nervous symptom mentioned in the history of the case.

Notwithstanding, however, this deficiency, the case possesses interest in more than one respect. In the first place, it affords us an example of carcinoma commencing in the axillary glands ; the breast being only secondarily engaged : and I am inclined to believe that such cases are more rapid in their progress, and more fatal in their termination, than those in which the lymphatic disease succeeds to that of the breast ; for the former case seems to indicate a more general contamination of the system, and is probably more frequently combined with visceral disease. At all events, in the case of Wakefield, no hope of recovery could have been entertained, even before the development of the disease in the mammary gland ; for the integuments were thickly studded with those hard, pale tubercles, which, when present, so uniformly denote the inveterate nature of carcinoma. Operations undertaken in such cases are miserable in their consequences. I have seen them performed under such circumstances more than once ; but in every instance the disease returned before the wound was healed, and reached its fatal termination with frightful rapidity. To the intelligent surgeon, they are beacons, which warn him of the danger of interfering with the disease. The swelling, the great œdema, and threatened gangrene of the arm, are to be referred to the con-

dition of the glands and veins of the limb ; the structure of the former was completely altered, and the functions of both glands and veins destroyed : in fact, the circulation through the veins must have been arrested to a greater or less degree for a considerable time before death. I do not think that sufficient attention has been paid to the state of the circulation in these cases ; the veins should in every instance be examined, to ascertain whether or not, and how far they are concerned in producing the œdema of the arm, so commonly met with in cancer of the breast, and so uniformly referred to the obstruction of the lymphatic glands. In the case of Wakefield, even the arterial circulation must have been diminished, the artery being compressed by the diseased glands, and also by the tumours found upon each root of the median nerve.

The obstinate constipation which this woman laboured under for many days was owing to two causes, either of which would have been adequate to the effect : first, the intestines were no longer stimulated by the influx of bile, owing to the compression exercised upon the ductus communis choledochus by the pancreas ; and secondly, the contracted rectum could scarcely permit the passage of fecal matter, so much was it compressed upon either side by the enlarged and scirrhus ovaries. The cause of the jaundice is obvious and of a purely mechanical nature ; about an inch of the duct was completely imbedded in and surrounded by the indurated pancreas ; Anel's probe could not be passed through it without using force, and it required much time and patience to discover its opening into the duodenum. It is seldom we meet with disease of the pancreas ; we often find, as Roche and Sanson observe, in the bodies of those who die of cancer of the stomach or liver, the pancreas surrounded by cancerous masses, developed in the surrounding cellular tissue, while the gland itself is almost always sound in the midst of this disorganization. Jobert mentions a case in which a tumour, developed in the pancreas, caused the almost total obliteration of the duodenum ; and Mr. Todd has given the par-

ticulars of a case in which the pancreas was scirrhus. The distended state of the gall bladder was remarkable in the case of Wakefield, but not so much so as I have seen in other cases. I have very frequently found it forming a tumour sensible to manual examination ; and under such circumstances, it has been more than once mistaken for an abscess and punctured. Andral has seen it distended to such a degree, as to touch the crest of the ileum, and even descend before it as far as the iliac fossæ : but the most remarkable case of the kind is, perhaps, that published by Mr. Todd in the first volume of the *Dublin Hospital Reports* ; the case is so interesting, and bears so much upon that of Wakefield, that I trust I shall be excused for again bringing it before the profession ; the patient was a girl æt. 14. " At the time I saw the girl," says Mr. Todd, " her skin was of a deep orange colour ; she was greatly emaciated ; had anasarca of the lower extremities, and appeared to suffer much pain, although almost wholly insensible to external objects. She was unable to speak, and seemed not to understand any question put to her. Her hands were firmly closed ; her jaws fixed, so that it was with difficulty I could pour a teaspoonful of wine into her mouth. She moaned incessantly, and frequently screamed, as if suddenly seized with acute pain. Upon examination, I discovered that the abdomen was distended with fluid, and that the epigastric and right hypochondriac regions were particularly tumified ; a distinct, tense swelling occupied these regions, and could be traced extending even below the umbilicus. At one point, which appeared more prominent than the rest, a little below the ensiform cartilage, and to the right of the *linea alba*, a fluctuation was very evident. This part was extremely sensible, as the least pressure on it appeared to increase the patient's sufferings ; and I thought it very probable that a large abscess of the liver was here approaching the surface. With this impression, and anxious to afford immediate relief, I made an opening into the most prominent part of the tumour, by dissecting cautiously with a lancet, and gave exit to a thin fluid,

coloured with green bile. From the appearance of the fluid which escaped, it immediately occurred to me that I had mistaken an over-distended gall bladder for an abscess, and having opened it, that its contents had mixed with and coloured the fluid effused into the abdomen. Wishing to prevent as much as possible the further extravasation of bile into the cavity, I introduced the canula of a trocar through the wound, which fortunately passed into the sac ; and the opinion which I had formed was then strengthened by my observing that the fluid discharged through the canula was viscid, green bile, of which I drew off upwards of two quarts. After withdrawing the canula, a considerable quantity of the thin fluid was discharged, such as passed through the wound before the tube was introduced, and the tumefaction of the abdomen entirely subsided. I then carefully examined every part of the abdomen, but could not discover enlargement of the liver, or any other swelling ; the patient, however, exhibited signs of augmented pain, when pressure was made on the epigastric region. In the course of the day, the girl appeared in a slight degree relieved, and became more sensible ; but in the evening, all the unfavourable symptoms returned ; the belly became swollen, painful, and tense ; she had several attacks of convulsions during the night. Next morning she was completely comatose ; her respiration laborious ; her pulse weak and intermitting ; and she died in the evening of that day.

“ On the following morning I examined the body. When the abdomen was opened, a large quantity of serous fluid, mixed with green bile, was discharged ; the peritoneum was inflamed in several parts, and flakes of coagulable lymph adhered to its surface, and floated in the fluid. The liver was perfectly healthy, and of its natural size ; the gall bladder was empty, and contracted ; the hepatic and common ducts were enormously distended, and contained more than a quart of bile, exactly similar to that which passed through the canula in the operation. *These ducts formed a sac which extended from the porta*

of the liver to the os sacrum, lying behind the duodendum, pancreas, and root of the mesentery, and stretching in a transverse direction, so as to cover the anterior surface of the right kidney, and the greater part of the left. Having discovered and dilated the opening in the sac, which had been made with the lancet, I traced the distended duct up to the liver, where it received the smaller hepatic ducts, and these were so much enlarged, particularly that of the right lobe, as to admit of the introduction of one of my fingers without difficulty. The cystic duct, at its junction with the hepatic, was dilated for about half an inch; but on examining the interior of it at this part, a sort of convolution or fold seemed to have been formed, which probably acted as a valve, and prevented the bile from passing to the gall bladder; the remaining portion of this duct was pervious, and of its natural size. I next proceeded to search for the extremity of the common duct, which opens into the duodenum, but could not discover it; the pancreas was scirrhus, and that portion of the gland with which the ductus choledochus is connected, together with the surrounding cellular substance, and absorbent glands, was converted into a hard, solid mass, closely adhering to the duodenum and lower part of the enlarged biliary duct, which last seemed to have been completely obliterated. The pancreatic duct was also obliterated near to the intestine, and the biliary duct thickened, and its inner surface lined with a gritty deposit. Such is the history of this remarkable case; and it affords, as Mr. Todd remarks, a striking example of the power which some organs possess of accommodating themselves, both in their capacity and structure, to the force of distention when gradually applied to them. The history of another case, in which the gall bladder was punctured, has been published in the *Dublin Hospital Reports*, vol. v., and also in the *Cyclopædia of Practical Medicine*, by Dr. Stokes, in the article upon *Inflammation of the Liver*, to which I would refer for some interesting remarks upon obstructions of the biliary ducts.