

might be contemplated, if the patient's strength would allow of the operation.

The young man progressed pretty favourably for the first week, when a small dark fungus was noticed to spring from the extremity of the divided femur; this gradually increased to the size of a pigeon's egg, and looked very much like coagulated blood. The case from this time took an unfavourable aspect, and the patient died on the 3rd of May, 1852, about three weeks after the operation.

On a post-mortem examination it was found that the whole shaft of the femur had completely lost its vitality, there being a granulated purulent deposit in the medullary canal, with interspersed spots of a deep black colour. Only half the head of the femur was deprived of life; the other half was still in a highly congested state. In the cavity of the joint a considerable effusion of pus existed, but no other purulent deposit or encephaloid growth was found in the other parts of the frame.

This case is well calculated to make us pause for a moment, to examine the question of amputation at the joint above the seat of the disease, or in the continuity of the shaft. It is plain that at the time of the operation the femur, perhaps up to the head, was extensively diseased, and that the only chance of rescuing the patient from his perilous situation was the removal of the limb at the hip-joint. But this is really so terrible and fearful an operation, that the surgeon may well be excused for not undertaking it without mature consideration. And doubts will spring up still more forcibly, when he remembers that even the hip-joint amputation does not completely ensure the patient's eventual safety, as the disease may, and, indeed, is very likely, sooner or later, to seize upon some of the viscera. We do not, of course, pretend to solve the question; but we hope that by collecting facts, and by synthetically studying them, we may pave the way to the laying down of trustworthy rules for the guidance of surgeons, when they have to deal with cases similar to the present.

One point should in the meanwhile not be forgotten—namely, that patients affected with encephaloid cancer have a longer average of life, after operation, than those who suffer from scirrhus cancer. Mr. Paget stated, in his excellent lectures delivered this year at the Royal College of Surgeons, that the general result of operations for encephaloid cancer is more favourable than those for scirrhus cancer of the breast. In the latter, the general average duration of life, after the patient's first observation of the disease, is forty-nine months; the average life of those whose breasts are removed, and who survive the effects of the operation, is about forty-three months; and the average of life of those in whom the disease is allowed to run its course is about fifty-five months. In the former, (encephaloid cancer,) the average length of life, when the eye, testicle, breast, bones, or other external organs are affected, is twenty-four months from the first notice of the disease; the average for those from whom the primary disease is removed, and who do not die in consequence of the operation, is about thirty-four months; while the average of those with whom the disease is allowed to run its course is *scarcely more than a year*. These data were confirmed in a letter which Mr. Paget has addressed to the editor of this journal, (*THE LANCET*, vol. i. 1852, p. 603.) Thus it will be seen that operations offer, comparatively, a tolerable chance of relief in cases of encephaloid cancer. We shall now attempt a short sketch of the third case of encephaloid disease of the femur, from the notes kindly furnished by Mr. Blagden, late surgical-registrar at St. George's Hospital.

ST. GEORGE'S HOSPITAL.

Encephaloid Disease of the lower portion of the Femur; Amputation; Recovery.

(Under the care of Mr. HENRY CHARLES JOHNSON.)

JOHN L—, aged twenty-three years, was admitted January 15th, 1851, under the care of Mr. Johnson. The patient presents a tumour which is very ill-defined, and situated in the right popliteal space, as well as at each side and in front of the lower extremity of the femur. The patella cannot be distinctly felt, being obscured by the general swelling at this part. The circumference of the tumour over the largest point (which is directly on its centre) is twenty-two inches, and over the situation of the patella twenty-one inches. The swelling is gradually lost above, on the front of the thigh, where great hardness can be felt; but there is no distinct line of demarcation between the diseased and healthy structures. The leg is very cedematous, and pits on pressure.

An obscure sense of fluctuation is perceivable in the tumour itself, there is considerable tension of the skin, and slight tenderness when handled, but at other times a dull, aching pain is experienced. No pulsation can be detected in any part of the swelling.

The countenance of the patient is sallow and cachectic, with an anxious expression; he is very weak, and has a nervous and rather irritable manner. Tongue dry; pulse rapid. Soon after the commencement of the disease, leeches and blisters were employed, which gave no relief. About a fortnight before his entrance into the hospital, the tumour had been punctured with a grooved needle, and afterwards an incision made, when a small quantity of blood escaped. The patient gives a very imperfect account of the origin and progress of the swelling; he states, however, that it has existed sixteen weeks only, so that its growth would appear to have been very rapid.

On the 23rd of January, Mr. Johnson removed the thigh just below the trochanter, by the flap operation, the patient being insensible with chloroform. Free bleeding occurred, though the femoral artery was steadily compressed by an assistant, and the vessels were rapidly tied.

On examining the amputated limb, it was found that the compact structure of the bone was exceedingly dense. The tumour presented a brain-like appearance; some of the cysts of which it was composed were of large size, and contained a considerable quantity of blood and serum. The tumour was situated between the ham-string muscles; it extended upwards as far as about the lower fourth of the thigh, and then seemed to cease *suddenly*, contrary to the appearance which obtained while it was connected with the rest of the limb. Below, the tumour reached to the inferior part of the popliteal space, and the cancelli of the lower expanded portion of the femur were soft, easily broken down, and filled with medullary matter. Where the bone becomes narrower, a very small spot of the malignant deposit was visible in the interior of the shaft, not larger than the surface of a split pea.

The progress of this patient created at one time considerable alarm; attacks of hæmorrhage occurred several times, which successively necessitated the application of ice, exposure to the air, and the use of the tourniquet. The young man was in the mean time becoming extremely weak, and no sign of union or healthy suppuration appeared in the stump, the discharge being of a thin and sanious character. Under these circumstances, Mr. Johnson had recourse to emollient and astringent applications, careful bandaging of the stump, support, and, above all, to large doses of chlorate of potash, in the following form:—Chlorate of potash, one scruple; spirit of chloric æther, fifteen minims; cinnamon water, one ounce: to be taken three times a day. The state of the patient continued very precarious for one month after the operation, when the stump began to heal kindly; all the ligatures were gradually removed, and the health improved considerably. Forty-eight days after the amputation the wound was quite cicatrized; the patient went into the country, and we are glad to say that he has been seen more than a twelvemonth after his discharge, when he was found to have grown stout, and there were no symptoms of a recurrence of the disease.

When encephaloid cancer attacks the upper part of the femur, and patients apply for relief when the affection has made considerable progress towards the ilium, there can be no doubt about the propriety of waiving any kind of operation, and resorting to palliative means only. There are at present, at the London and St. Bartholomew's Hospitals respectively, two victims of this dreadful disease, where the upper part of the femur and the pelvis present tumours of an encephaloid kind, about the size of three adult heads. We shall just give a few details of these cases, as affording useful facts bearing upon the history of the disease.

LONDON HOSPITAL.

Encephaloid disease of the Pelvis and upper part of the Femur.

(Under the care of Mr. JOHN ADAMS.)

WILLIAM D—, aged eighteen, was admitted into the Prince of Wales's ward, under the care of Mr. Adams, Nov. 18, 1851. The patient has been residing in Bethnal Green, working as a hemp and flax dresser, and enjoyed excellent health until about four months before his admission; his mother, however, died of *tumours* on her neck and below the knee, and his brothers and sisters are issues of

a second marriage. About two years before the boy was received into the hospital, he struck, while running, the posterior part of the right ilium against a lamp-post; he experienced much pain, walked lame for two months, but became again quite well. Twenty months after this accident, the patient was suddenly seized, while at play, with a very sharp pain exactly at the spot where he had long before struck himself; he immediately felt a difficulty of walking, and noticed a swelling on the upper and back part of the ilium, which swelling has ever since been increasing. The pain now was principally referred to the groin and knee, and he was soon obliged to keep his bed.

When admitted, the tumour was about the size of a small plate; but it has, for the last six months, taken an enormous development towards the groin and the femur, invading the whole of the right half of the abdomen from the umbilicus downwards, the entire ilium, and the upper third of the femur. The largest mass of the disease lies over the great trochanter, the whole tumour presenting about the same size as the trunk of a full grown man. Large veins ramify over this enormous growth, and so great has of late been the distention that vessels the size of a crow-quill, and filled with light fluid, are seen coursing under the skin, these being hypertrophied lymphatics. The emaciation of the poor boy has kept pace with the dreadful increase of the encephaloid tumour; he is extremely thin, the scrotum and right leg being at the same time œdematous from pressure on the pelvic veins.

The patient has taken large doses of cod-liver oil; he is principally kept up by wine and opiates; and the power of these must indeed be great, as his debilitated frame has not yet sunk under this formidable disease.

We beg a few moments' attention for an analogous case at the following institution.

ST. BARTHOLOMEW'S HOSPITAL.

Encephaloid Disease of the Femur and Ilium.

(Under the care of Mr. LAWRENCE.)

WILLIAM W—, aged twenty-three years, following the occupation of porter, was admitted into Henry VIII.'s ward, under the care of Mr. Lawrence, June 23, 1851. The patient was born in London, and has had all the diseases of early age, including small-pox. His father died at forty years of age, but the patient does not know of what affection; the mother is alive, and his brother and sister are in the enjoyment of good health. He has been accustomed to very rough work, but could always procure good food; he indulged now and then in excessive drinking, but has never suffered in his health, except from the venereal disease.

Two years before admission, he was suddenly seized with pain in the knee while running, the uneasy sensation extending down along the tibia and up to the thigh. No tumour whatever had at that time made its appearance, and he was admitted into the Westminster Hospital, where he stayed one month, under the care of Dr. Hamilton Roe. After the patient had returned home, where he lay three months, the tumour began to appear in the great trochanter, and grew very rapidly. He was now re-admitted into the Westminster Hospital, and placed under the care of Mr. Lynn, the swelling having attained the size of a Dutch cheese.

It was evident at this juncture that the disease was of a very serious kind, and that hardly any measures, except palliative ones, could be resorted to. The tumour grew in the meanwhile pretty rapidly upwards and downwards, and was soon as large as an adult head.

In this state the patient was received into St. Bartholomew's Hospital, under the care of Mr. Lawrence; and as it was plain that the disease had invaded the upper third of the femur and almost the whole of the ala of the ilium, no direct relief could be thought of. For the last twelve months the tumour has made continual progress, and is now double the size it was on admission, being rather larger than two men's heads. It reaches to about five inches above the knee, and involves the whole of the left side of the pelvis. The patient has during the course of the disease suffered very acute pain, and is even now in great distress. Belladonna plaster to the tumour, and the internal administration of opium, give him, however, great relief.

The unavoidable length of these reports places us under the necessity of dividing them into two portions. We shall therefore continue these sketches next week, and present examples of encephaloid cancer as developed in the *humerus, clavicle, and testis*.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 22, 1852.—MR. HODGSON, PRESIDENT.

A MEMOIR ON THE PATHOLOGY AND TREATMENT OF LEUCORRHEEA, BASED UPON THE MICROSCOPICAL ANATOMY OF THE OS AND CERVIX UTERI. By W. TYLER SMITH, M.D., Physician-Accoucheur to St. Mary's Hospital.

THE author first directed attention to the minute anatomy of the os and cervix uteri; and here, at the outset, he was desirous of expressing his warmest thanks and obligations to Dr. Arthur Hassall for his valuable assistance in the microscopical part of the investigation, and without which he could not successfully have prosecuted his researches. The mucous membrane of the os and cervix uteri, like the mucous membrane of other parts, consisted of epithelium, primary or basement membrane, and fibrous tissue, bloodvessels and nerves. But as there were some special characteristics pertaining to this tissue, he proposed, for the convenience of description, to examine, first, the mucous membrane of the os uteri and external portion of the cervix; and, secondly, the mucous lining of the cervical cavity or canal. The epithelial layer of the former of these situations was tessellated or squamous, and so arranged as to form a membrane of some thickness: by maceration, it could be easily detached, and it was then found closely to resemble the epithelial covering of the vagina, with which it was continuous. Beneath this epithelial layer was the basement membrane, covering numerous villi or papillæ, which studded the whole surface. Each villus contained a looped bloodvessel, which, passing to the end of the villus, returned to its base, and inosculated with other bloodvessels of the contiguous villi. These villi had been mistaken for mucous follicles, usually described as covering the surface of the os uteri; but the microscope failed to discover any distinct follicular structure in this situation. When a thin section of the surface of the os uteri was examined by a low power, the points of the villi could be seen as dark spots through the epithelial layer. A careful examination exhibited these spots as slightly depressed in the centre, yet nevertheless slightly elevated in their margins, nipple-shaped, and containing red points, which were the terminations of the looped bloodvessels. These appearances were produced by the villi being obscured by their epithelial covering. The thick layer of scaly epithelium, and the villi with their looped vessels, were the principal anatomical features of the mucous membrane of the os and external part of the cervix uteri; and these structures played an important part in the pathological changes which occurred in the lower segment of the uterus in leucorrhœa. Between the margin of the lips of the os uteri and the commencement of the penniform rugæ, within the precincts of the cervical canal, a small tract of smooth surface was usually found, which to the naked eye seemed of more delicate structure than the neighbouring parts, and when examined by the microscope was found to be composed of cylinder epithelium, arranged after the manner of the epithelium covering the villi of the intestinal canal. The cylinder epithelium covered in this situation villi two or three times larger than the villi upon the surface of the os uteri—so large, indeed, as to be visible to the naked eye when viewed by transmitted light. Within the cavity of the cervix uteri, the mucous membrane contained four columns of rugæ, or folds, arranged in an oblique, curved, or transverse direction; and between these columns were four longitudinal grooves. The two sulci in the median line, anteriorly and posteriorly, were the most distinct; and of these, the sulcus of the posterior columns was the most strongly marked. In the normal state, the transverse rugæ, with the fossæ between them, were filled with viscid, semi-transparent mucus; and when this was brushed away, a reticulated appearance, caused by numerous secondary rugæ, was visible. The author gave a very minute description of these four rugous columns, and the furrows between them, which was illustrated by some very beautiful drawings of the cervical canal, displaying the rugous columns and fossæ of the natural size, and magnified nine and eighteen diameters. The latter power showed a large number of mucous fossæ and follicles, crowding the depressions between the rugæ, and the rugous elevations also. The author mentioned that a healthy virgin cervix, of normal size, contained at least ten thousand mucous follicles. This anatomical arrangement secured a vast extent of superficial surface, which was still further increased by the presence of villi similar to those found in the lower part of the cervix: they were found in considerable numbers on the large rugæ and other parts of the mucous membrane in this situation. By this disposal of the mucous mem-