There seems very little doubt, as established by Ricord, that the (poisoned?) contents of the lymphatic vessel itself in the lymphatic gland enlarged, is different from the common suppurative enlargement of the rest of the gland. There seems very little or less doubt that a great deal of the syphilis of plates and books is factitious, and the result of mercury and this other poison thus elaborated. These inguinal glands, it need scarcely be said, are found in two groups, one of small extent, situated along the line of Poupart's ligament, usually the seat of bubo, as receiving the superficial lymphatic vessels from the genital organs, this line of Poupart's ligament being the battle-field of the syphilographers; while another group of larger glands, clustered around the internal saphenous vein, near its termination, receive the lymphatics from the lower extremity. We once saw severe bubo in these glands in a poor young married woman, a nurse, who was attended during her previous confinement by a midwife who had a large chancre on her right hand. One sees an immensity of syphilis cases at Guy's, at St. Bartholomew's, at the London Hospital, etc.; and we cannot help saying that mercury and mercurial fumigations are gone almost entirely out of fashion, as well as the manifest indecency of syphilitic inoculation.

T. M., aged 18 years, was admitted, under the care of Mr. SOUTH, at St. Thomas's Hospital, July 2nd, with symptoms referrible to ordinary syphilis and bubo. The latter has been punctured three times during a month, and large quantities of fluid followed each operation, so much so that he has to keep a supply of old rags to dry up the lymphatic secretion. The ordinary suppurative inflammation, however, has been checked, and the lymphatic gland is now reduced to its normal size: in other words, the bubo has been prevented from "coming to a head"; and, with the aid of a few Plummer's pills, which Mr. South ordered as a matter of form, to sweeten the blood, as the patient required them, the cure is quite satisfactory.

The views of Skey, Carmichael, Evans, Ricord, etc., are gradually superseding the mistakes made as to the Hunter chancre, as this sore is seldom or really never at all seen in hospitals in the form once described, but not by Hunter.

At Guy's Hospital especially, the treatment of syphilis cases by Mr. Cock and Mr. Birkett is very simple. At Bartholomew's Mr. Skey, at University College Mr. Erichsen, at St. George's Mr. Hewett, tend far and widely away from the mercurial plans so much in vogue once at St. Thomas's, and still, it is said, at the Lock Hospital and King's College, as well as in the *clinique* of Mr. Lawrence —the opposite of Mr. Skey at St. Bartholomew's.

PARACENTESIS THORACIS; BEST MODE OF OPERATING AND OBVIATING THE DANGER OF AIR ENTERING THE PLEURA.

A case of empyema was tapped by Mr. STANLEY during the session just ended, which led to some practical remarks on improvements in this operation.

As a rule, the best physicians are not in favour of tapping the chest; but where it is necessary, Mr. Stanley said, the position for the operation is between the fifth and sixth ribs midway between the sternum and spine, close on the upper edge of the sixth rib. This is the most eligible spot. One of the chief points to be avoided is allowing air into the chest after the operation. This danger has been obviated very much by an India rubber apparatus, which, by its elasticity, soaks as it were the purulent collection gradually from the pleura, allowing at the same time the compressed lung ample time to expand and fill the chest. This plan has been tried in Dublin, where the experience of Stokes in pleuritic cases, and the mechanical skill of the surgeons who have contrived the compression clamp in aneurism, Carte, Bellingham, Hutton, etc., has been also directed by Mr. H. Leet to the formation of an India rubber expansive ball attached to the apparatus for puncturing the chest, which seems to answer every purpose. The case of empyema tapped by Mr. Stanley was a patient in Dr. Burrows' ward, not presenting any feature of particular importance.

Some cases of empyema, (unfortunately a large number, as observed by Mr. Paget and Mr. Stanley in this case) are deposits of lymph, portioning the pleura into two or more dissepiments; then the rule already laid down will not hold good. "You are called," said Mr. Stanley, "by a physician, who tells you there are so many ounces of pus in the pleura which he wishes to be evacuated; and yet, with all your 'appliances and means to boot', when you have punctured the cavity at the sixth rib, none flows out; while a puncture lower than the seventh rib may wound the diaphragm." Mr. Stanley, in this contingency, recommends the puncture, as he has tried it himself with success, to be made quite at the back and lower part of the chest, where a certain *tactus eruditus* and complete stone-like dulness on percussion are indicative of a large deposit of fluid. Such an operation is of course not without danger; but, as Mr. Stanley well observed, where the life of the patient may be even prolonged for any conceivable period by even a doubtful operation, the *anceps remedium* is incontrovertibly *melius quàm nullum*. K.

Original Communications.

ILLUSTRATIONS OF THE PATHOLOGY OF CANCER.

By J. ZACHARIAH LAURENCE, Esq., F.R.C.S.

PART I *(continued)*.

GENERAL CHARACTERS AND CLASSIFICATION OF CANCEROUS TUMOURS.

(5) VILLOUS CANCER (?) (Rokitansky). Two cases of this disease have fallen under my observation,—one of the rectum, one of the bladder. Of the latter, I subjoin the following brief history; for which I am indebted to Mr. Quain.

CASE. James J., aged 34 years, came under Mr. Quain's care in University College Hospital, in November 1854. Upwards of three years previously, he first noticed blood in his urine; this had continued up to the present time, but now and then had ceased—once for as long a period as seven months together. After a time, symptoms resembling those of stricture supervened; incapacity to fully empty the bladder, incontinence of urine, and pain in passing his water. He had, in addition, pain and tenderness over the renal regions, especially the left, but none over the bladder.

At the *post mortem* examination, a florid red flocculent growth was found attached by a peduncle to the right side of the base of the thickened bladder. The kidneys consisted principally of the greatly distended pelves and calices; the ureters were also much enlarged. The liver appeared healthy. The heart was hypertrophied; the lungs congested. *No morbid growths were discovered in any other part of the body.*

I have retained the name "villous cancer" for this disease, rather from deference to the opinions of the eminent pathologists who have described it under that name, than from my own conviction. This conviction is, that it is not a constitutionally malignant disease; in a word, no form of cancer. This opinion rests on the following facts:—

1. No secondary deposits of the same form of growth have ever been found associated with the primary growth.

2. The cause of death from this disease is not from any general infection of the system, but from the local hæmorrhages, accelerated by intercurrent affection of the viscera.

It is a fact not unworthy of remark, that in most of the reported cases the hæmorrhage has not been constant, but has ceased at intervals: in the case narrated above, once for as long as seven months together. In all the cases

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occurring in the bladder, disease of the kidneys and their excretory apparatus has ensued—a fact not without its practical bearings, liable, as it is, to divert attention from the real seat of the disease.

There is reason to believe that two distinct species of growths have been confounded under the term "villous cancer": one, a truly cancerous growth, for the greater part dense and solid, but terminating in some villous prolongations; a second, containing little or no solid material in its construction, but consisting nearly entirely of vascular, villous, pencil-like processes, and in many instances attached by a narrow peduncle, from which the villi radiate and spread out in all directions.

As an instance of the first, the following case from Rokitansky's paper on the subject* may be quoted.

Case. A woman, aged 68 years, had primary cancer melanodes of the right eyeball. After death, the liver was found "permeated by very numerous medullary growths, varying in size from a walnut to a fist, tuberously prominent at the surface, partly pale, partly deep greyish brown, here and there also white." Three large masses on the front border of the right lobe became gradually looser in texture, and terminated in "an aggregate of very loosely connected villi."

The case observed by myself (*suprà*) offers a good illustration of the second, the simple form of the disease.

3. Another great argument in favour of these views, is that in those instances, where the growth has been removed and the patient has survived the operation, it has not recurred. Professor Franz Schuh removed a "villous cancer" from the rectum of a woman in October 1846.† In a letter, dated July 21st, 1856, he writes me, "the patient is still in the best health." Professor Quain removed a typical specimen of "villous cancer" from the rectum of an old lady:‡ it has not recurred up to the present time, upwards of two years after the operation. Professor Schuh writes me of another case, in which he operated successfully nine months ago. This latter surgeon lost one patient from pyæmia, and a second from hæmorrhage, after the operation.

(6) Osteoid Cancer (Müller, Paget). The osteoid order of growths has so unequivocally been proved to be of a malignant nature, that any further explanation of their position in the preceding classification is superfluous. The following case may be taken as a representative of the species.

Case. *Osteoid Cancer of the Femur: Death: Secondary Deposits in the Lungs, Omentum, and Diaphragm.* James V., aged 55 years, a cattle dealer, was admitted into the University College Hospital, under Mr. Quain, for a tumour of the right thigh. He had suffered for the last two years from a dull aching in the lower part of the affected thigh, which caused him to limp in walking. The leg, too, would swell in the course of the day, but went down again in the night. Eleven months before his admission into the hospital, whilst leaning against a hurdle at a cattle market, a sheep ran its head against the lame limb; he fell, and the thigh bone was found broken at its lower third (by the sheep, he stated, not by the fall). The fracture was adjusted on a long splint, but united badly; so that all he could do after a time was to bear on his toes with the help of crutches. At a later period, he met with a second accident: he was being wheeled about in a chair, when he was thrown out, and the injured limb, although not directly struck, was much shaken, and soon afterwards began rapidly to enlarge. He had noticed a distinct tumour for the last four months. On his entrance into the hospital, he had a large tumour, measuring 23-24 inches in its greatest circumference at the lower half of the right thigh; this tumour was of a stony hardness and resistance, excepting at its inner side, where it felt elastic. This latter part differed also from the rest of the tumour, in forming a kind of secondary, red, carbunculoid prominence, which at its centre displayed a somewhat sloughy, but yet not malignant looking ulceration. The skin over the rest of the tumour, with the exception of a few dilated veins, appeared natural. The thigh above the tumour was much swollen, but felt sound. The inguinal glands were enlarged and tender. The outline of the patella could be easily defined with the finger. The whole leg and foot were swollen and somewhat brawny, but neither discoloured nor tender. The pain in the tumour itself had never been very acute, but had been much worse in the leg, where he compared it to "a thousand pins pricking" him. Two months before, the softer portion of the tumour had been lanced; about a couple of ounces of bloody serum came out. When Mr. Quain subsequently punctured it, only blood exuded.

He was not aware of any consumptive tendency in the family, but a grandmother and a sister had both died of cancer. He was an intelligent, tolerably healthy looking man, though his skin had a yellowish cast, and numerous small varicose veins supplanted the colour in his cheeks. He had been losing flesh for the last seven or eight months: this he attributed to confinement in bed; for he had previously been a most active man, and was well known in his part of the country for his skill as a cricketer.

Such were the main facts of a case which may seem very clear to the reader of it, as it now stands, but which gave rise at the time to serious doubts as to its true nature. Was it a case of diseased callus, or was it cancer of the lower end of the femur? These doubts were very soon removed. The ulceration of the skin at the inner side increased, exposing a fœtid, foul, greenish-black surface, devoid of granulations, which bled from time to time. He lost flesh rapidly, and got weak; his tongue became furred, and he complained greatly of thirst; his urine got loaded with urates, and his loins tender. Bed-sores formed over the left calcaneum, the right trochanter, and a considerable one over the sacrum. A large portion of the fungus sloughed away, attended with bleeding, which required the application of matico leaves to stop. Shortly before death, his breath acquired that peculiar sickly sweet odour which has been supposed to be indicative of purulent fever.

Post Mortem Examination, twenty hours after death. The lower part of the femur was enveloped and confounded in a large bony growth. The lower articular surfaces had remained intact, but beyond these the tumour had effaced all vestiges of the bone from which it had originated. Above the tumour was the rounded end of the femur, which hence upwards had preserved its pristine characters unimpaired from this its point of fracture. The tumour was 6 or 8 inches long, and about 16 inches round: its surface was tuberous, its general outline round, but shelving off internally into a central depression, which was bounded outwardly by four large irregular nodulations of the surface. Into some parts of the tumour the knife sank, as it would into soft cancellated bone, but in others the shell of osteoid tissue resisted the passage of the knife altogether. Behind, the upper part of the growth was represented by a sloughy soft tissue, excavated in part, and containing some irregular bony fragments in its substance. There was no kind of transition whatever between the hard and soft parts of the tumour; the limits of each were abrupt. Some of the osteoid tissue was finely speckled by short streaks of opaque white, in a more translucent, more yellow basis. A small portion of the section in the centre had a feathery disposition of the bone. The section offered no indication whatever of the shaft of the femur in its substance. At the antero-inner side of the great tumour was a small outshoot of osteoid tissue upwards, firmly connected, but having no organic continuity with the upper sound half of the femur. There was a good deal of thickening of the subcutaneous tissues of the fore part of the thigh. The femoral artery was tilted forwards by a subjacent ossified mass of lymphatic glands. In about the middle third of

* "Ueber den Zottenkrebs, von Prof. K. Rokitansky", in the "Sitzungsberichte der Mathematisch-naturwissenschaftlichen Classe der kaiserlichen Akademie der Wissenschaften. Bd. 8. Jahrjang, 1852. Wien, 1852." Page 524.

† Vide "Pathologie and Therapie der Pseudoplasmen, von Dr. Franz Schuh; Wien, 1854"; page 432.

‡ Vide "The Diseases of the Rectum", by Richard Quain, F.R.S. Second edition. London, 1855. Page 295.

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the femoral vein, about an inch and a half from the upper part of the tumour, was an elongated osteoid deposit, about the size of a small bean, attached at its ends and on one side to the inner coat of the vein by a soft substance. *Brain and Membranes.*—Healthy. *Heart.*—Weighed 9¾ oz. Valves and muscular substance healthy. *Lungs.*—Left lung weighed 13½ oz.; its whole surface studded over with plates of osteoid deposit. I counted on the outer surfaces of the upper and lower lobes respectively twenty and eighteen such plates; on the inner surface of both lobes, twenty; on the base of the lung, seven; altogether, sixty-five. The smallest plate seen was about the size of the section of a mustard seed; the largest measured an inch and a half by an inch. The general shape of these plates was flattened superficially, in conformity with the outer surface of the lung (above which they rose but very slightly)—more nodular and irregular at their deep surface. Some deposits within the lung substance were altogether nodular in form. The superficial contour of the plates was mostly rounded, but sometimes trapezoidal. Around these the pleura was puckered into a number of fine radiating pleats, but the lung substance itself was not drawn in, was crepitant, and, to all appearances, quite unchanged; so that these osteoid deposits might be looked on in the light of simple foreign bodies imbedded in the pulmonary tissue. This in a measure accounted for the absence of all chest symptoms during the patient's life time. Right lung weighed 22½ oz. On the outer surfaces of the two upper lobes, the number of deposits was twenty; on that of the lower lobe, sixteen; on the inner surfaces of both lobes, fifteen; on the base of the lung, ten; together, sixty-one; so that both lungs were pretty equally affected. At the outer aspect of the lower lobe, near the base, was a patch of pulmonary apoplexy, an inch and a half across, by two inches long. In all other respects, this lung agreed with its fellow. *Liver.*—To all appearances, healthy; weighed 53 oz. *Kidneys.*—Sound. *Omentum.*—In its lower border, an osteoid deposit, the size of an "agate" marble. The anterior layers of the omentum glided easily over it, but the posterior adhered round the diameter that separated its anterior and posterior halves. *Diaphragm.*—Above the left half of the cordiform tendon, lying in the very thin muscular substance, was a deposit of osteoid matter, resembling in size and shape an olive-stone.

Minute Anatomy of the various Growths. I. *Tumour of the Femur.* *(a)* The dense hardest osteoid tissue showed no definite structure, but an irregularly "loculated" appearance. *(b)* The less hard, but still firm osteoid tissue, exhibited, in fine sections, an irregular, ill-defined fibrous arrangement of its elements; but, on the addition of hydrochloric acid, an abundance of carbonic acid bubbles were evolved, and, in a good many points of the section, a finely fibrous structure was brought out, which appeared due either to elongated nuclei or to fibres closely packed, and differed altogether from the microscopic characters of ordinary cellular tissue. No structure of true bone was observed. Some fibro-plastic cells and quantities of nuclei were seen in washings of the tissue. *(c)* The soft non-osteoid component of the tumour had no tendency to transition into the osteoid substance, where the two came in contact. Some of it bore a naked-eye resemblance to some varieties of medullary cancer. One portion is described in my note-book as "a stratum of a grey, somewhat translucent, soft, but consistent tissue, with points of hæmorrhage in it, and in no way differing from ordinary encephaloid disease." Yet the microscopic characters of this latter were not those of cancer; it was, on the contrary, a true fibro-plastic development. All modifications of form of the fibro-plastic cell, nuclei varying in form from oval to fusiform, and multitudes of fine oil-globules, were its elementary constituents. Their sections had a well marked fibrous appearance, from the parallelism of these elements; these were at some parts entirely fusiform nuclei, forming what might be not inappropriately termed a "nuclear" tissue.

II. *Tumours of the Lungs.* The surface of many of these showed a spicular feathery structure, the spicula radiating from the centre to the circumference, with fine vessels running parallel between them: indeed, the great vascularity of some of these plates was remarkable. A thin section, treated with hydrochloric acid, and examined with a high power of the microscope, displayed—(1) *fibrous* structure, the fibres being all arranged in parallel layers, which often had a lacuniform arrangement—an approach to Havesian canals; studding the section irregularly over were seen very distinct lacunæ and canaliculi; (2) a "nuclear" structure, of the description mentioned supra.

III. *Tumour of the Omentum.* This had much the aspect of the tumour of the thigh, but was much more vascular; indeed, it resembled closely a portion of inflamed bone. The microscopic characters were also similar, excepting that the fibrous structure was much more distinct; and that there were no cell-nuclei. A quantity of minute narrow nuclei were seen, and here and there a solitary fibro-plastic corpuscle.

Throughout a laborious examination, of which the above are the results, no cancer-cells nor cancer-nuclei were observed.

[*To be continued.*]

ON TAPEWORM, AND ITS TREATMENT BY THE OIL OF MALE FERN.

By WILLIAM JENNER, M.D., Physician to University College Hospital, to the Hospital for Sick Children, etc.

[*Read before the North London Medical Society.*]

IN February 1852, Dr. A. Fleming, of Cork, endeavoured to found a Therapeutical Society. Among the questions proposed by Dr. Fleming was, "The Action of the Oil of Male Fern in Tænia". He appended to the question the following note:—"In addition to a brief general history of the cases, the answers to this question should specify the physiological effects, if any, of the drug—whether given alone, or followed by a purgative; the interval between its exhibition and the expulsion of the worm, when that happens; whether the expelled worm be dead or alive, entire or broken; and, as far as possible, the duration of the cure." The society ceased to exist without having made a report; and I therefore propose to lay before the members of the North London Medical Society the answer afforded by my experience to Dr. Fleming's question, as well as some other points connected with the disease.

Dr. Gull, who, like myself, was a member of the Therapeutical Society, has already given the result of his experience to the profession, in the first volume of the third series of *Guy's Hospital Reports.*

On the table are specimens of the two tapeworms* found in the human intestine; viz., tænia solium and bothriocephalus latus.

Locality. The bothriocephalus latus, as is well known, infests the inhabitants of all those countries which lie to the east of a line drawn from the mouth of the Vistula to the mouth of the Nile. It is *the* tapeworm, then, of Asia,† of Russia, East Prussia, and Poland; while the tænia solium is *the* tapeworm of the remainder of Europe, of America, and Africa.

To these rules there are, however, several exceptions; *e. g.*, in the East, tænia solium only is known in the Island of Java; in the West, the bothriocephalus is the common tapeworm of Switzerland, and of the adjoining parts of the South of France. In Abyssinia, also, the bothriocephalus is probably the common intestinal entozoon. In certain localities, both genera are found; *e. g.*, the Canton of Zurich.

The specimen of bothriocephalus on the table was obtained from a young lady living in London; but then she had visited two of the countries in which bothriocephalus

* Bilharz found in Egypt and Abyssinia a third kind, viz., Tænia nana; and Schmidtmüller a fourth in the East Indies, viz., Bothriocephalus tropicus.

† Virchow says that the tapeworm of Asia is the tænia solium.

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