CASES
OF
FUNGUS HÆMATODES,
WITH
OBSERVATIONS;
By **GEORGE LANGSTAFF, Esq.**
AND
AN APPENDIX
CONTAINING
TWO CASES OF ANALOGOUS AFFECTIONS.

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HAVING devoted a considerable portion of my time during the last fourteen years, to the prosecution of the study of morbid anatomy, and having with considerable labour and attention obtained specimens illustrating most of the diseases to which the human body is liable, I am induced to offer the following cases to the Society; and shall feel much gratified, should they be considered as throwing any light upon the hitherto incurable disease, they are intended to describe.

I have adopted the term *Fungus Hæmatodes*, although it does not appear to me always applicable, because it is the general name of a disease, the external character and structure of which are well understood by most pathologists; and further from respect to the gentleman* who first gave the disease this name.

For the better elucidation of the subject, I shall first describe the tumors that have the fungoid character, which, if situated on the external part of the body, would cause absorption of the integuments, and bleed freely from the fungous growth, if not prevented by sloughing; secondly, the pulpy or medullary kind, which I consider as a species; thirdly, the union of both as a variety; and lastly, that which is called carcinoma, and which, in my opinion, has so far an affinity to fungus hæmatodes, that the latter may be considered a modification of the former.

Case of Fungus Hæmatodes.

A man, forty-five years of age, of a sallow complexion, whose health had been declining for several months, noticed a tumor about the size of a small marble, on the anterior part of the right leg,

* Mr. Hey, of Leeds.

about four inches below the superior part of the head of the tibia, and an inch and half from the spine of that bone. As the tumor was not at its commencement attended with pain, it was neglected by the patient, till it had extended to two inches and a half in diameter, to which size it had arrived in four months. It was now painful when pressed, or when the limb was moved ; the temperature of the integuments covering the part was increased, and they shewed a delicate purplish blush ; the swelling was firm, yet slightly elastic.

Leeches and evaporating lotions were applied; the state of his general health, his diet, and the proper position of the limb, were attended to. This plan of treatment was assiduously pursued for more than a month, without checking the increase of the swelling, which was now double its former size; the integuments were more discoloured, and had been partly absorbed at the centre of the swelling to the extent of the circumference of a shilling, rendering the part almost as thin as if only covered with cuticle; but there was not the least fluctuation to be felt, the tumor remaining firm and elastic.

Shortly afterwards, the cuticle was absorbed, and a fungus shot forth, accompanied with a slight discharge of blood. The fungous growth gradually protruded, although means were employed to

check it; the surrounding integuments were in consequence removed by the absorbents to the circle made by the base of the tumor: there was during this period a discharge of blood, frequently of an ichorous quality; the surface of the fungus, when the latter discharge took place, having a sloughy appearance, which it did not possess when the hæmorrhagic action was present.

The local disease, in spite of medicine, had now brought on so great a degree of constitutional disorder, as to endanger the loss of life unless the patient submitted to the amputation of the limb, as the most likely chance of saving him. To this operation, however, he would not consent, but agreed to the proposal of having the tumor extirpated.

With a view to prevent a recurrence of the disease, the sound integuments were freely removed with the fungus, which seemed to have its origin in the cellular tissue of the *tibialis anticus*, and *extensor longus digitorum pedis*. It was necessary to remove portions of the substance of both muscles. There was considerable hæmorrhage during the operation, which principally proceeded from the cutaneous and muscular arteries given off by the *arteria tibialis antica*, and some branches of this from their increased size were obliged to be secured by ligatures. The patient's health slowly improved; the wound cicatrized in a very tardy

manner to about the size of a shilling, and upon the seat of the former morbid growth, but it could not be made to heal further. The newly formed integuments were extremely thin and glossy, and shewed several superficial veins.

About three months after the operation, the fungous growth again began to shoot out, and it appeared quite useless to attempt to prevent its malignant progress. It discharged blood and ichor as in the former instance; the patient experienced almost constant and excruciating pain in the base of the tumor, and also in the upper part of the tibia. His health in two months more was affected to an alarming degree, which, with the unsuccessful result of the operation, induced him to agree to amputation. The limb was therefore removed above the knee.

I injected the amputated limb with size and vermillion, to ascertain as nearly as possible the vascularity of the newly formed part. A longitudinal section was afterwards made through the middle of the tumor, when it was found to arise from the cellular substance of the muscles of the *tibialis anticus*, and *extensor longus digitorum pedis*, and had produced a pulpy white and degenerate state of the muscular fibres in the vicinity of the diseased part. The substance of the diseased part was composed of organized lymph, broken down coagulated blood, and a pulpy brain-like mass. The irritation and

pressure of the tumor had also occasioned absorption of the periosteum of the tibia to the extent of four inches, and the surface of that bone was removed to about the same length by a similar process. The external coat of the anterior tibial artery, near the disease, was thickened by inflammation, and its accompanying vein was for several inches filled with coagulated blood and pulpy matter, which did not adhere to its internal surface; but the vessel, although thicker than natural, did not possess its wonted tenacity, and was of a bluish colour, which it still retains in spirits.

On examining the stump, five days after the operation, it was found to have adhered as much as could be expected, considering the patient's reduced state of health. All the ligatures were removed by the 12th day after the operation; but the wound healed very slowly, looked extremely unhealthy, and discharged an offensive sanies in profuse quantity. Although every endeavour was made to re-establish a healthy state of the constitution, it was unavailing; he became extremely irritable, and weak; the digestive organs were more deranged; he had almost constant cough, with expectoration of mucus, unaccompanied with hectic fever. The discharge from the stump continued; he sunk gradually, and died eight weeks after the amputation.

Dissection.

There had not been the least disposition in the stump to reproduce the disease for which the removal of the leg was deemed necessary. It had a sloughy appearance merely from the want of vital power in the part necessary for its reparation.

The liver was large, pale coloured, and its structure remarkably soft; there were several tubera from the size of a pea, to a small nutmeg, in its substance, and on its surface, but they were not much elevated; the larger kind having a central dimpled opake spot on the peritoneal covering, with minute, newly formed and tortuous arteries supplying these parts; similar to what we notice on the conjunctiva when opacities or specks are forming on the transparent cornea. The tubera consisted of loose coagulated blood, and medullary substance like the disease in the leg; they were very vascular, not divided by cellular septa; and had very delicate cysts. In the lungs, and immediately underneath their pleuræ, there were several bodies, larger than those in the liver, and the air cells and ramifications of the bronchia were loaded with a very thick white secretion. The bronchial glands were enlarged, particularly those between the division of the bronchia. When cut through, this enlargement was found to be occasioned by

fungous tumors in the centre of each ; the external parts of the glands preserving nearly their natural appearance.

*Case of Fungus Hæmatodes in the Urinary Bladder,
Liver, and Lungs.*

I. B. a pauper, sixty-eight years of age, had laboured under an affection of the bladder upwards of five years, and had been under the care of several surgeons without experiencing any essential relief. During the last six months of his life, he had suffered the most excruciating pain in the region of the kidneys and bladder, attended with almost constant desire to void urine, which was effected with the greatest difficulty, either by drops, or in a very small stream, and generally coloured with blood. He also felt much pain in the rectum, which was greatly aggravated by costiveness, and was teased with a frequent dry cough, accompanied with dyspnœa.

An examination per rectum, proved that there existed an enlarged state of the prostate gland, and slight pressure occasioned great pain. A bougie of moderate size was introduced into the urethra to ascertain the state of the canal. It passed readily as far as the membranous part, but could not be conveyed beyond it ; and it was with

the greatest difficulty one of the smallest kind was made to enter the cavity of the bladder.

The symptoms daily increased, although every exertion was made to alleviate his suffering; his health and appetite rapidly declined; and his bowels, which before had usually been obstinately costive, became quite the reverse.

On the 16th of March, he voided scarcely any thing but blood from the bladder; the quantity, although it flowed by drops, was in the course of twenty-four hours considerable, and the efforts of that viscus were so frequent and violent, as to occasion, to use his own words, "the most distressing torment."

He became feverish; his pulse extremely small and frequent; tongue parched, and of a dark brown colour; gums and teeth covered with sordes; and the sensorium much deranged. In short, he resembled a person in the last state of typhus. In this miserable state he lived four days.

Dissection.

The first thing on opening the abdomen, which attracted particular notice, was a bloody effusion beneath the peritoneum, on the right side of the

body, extending from the seat of the kidney as far as the pelvis. The fluid proved to be offensive smelling urine mixed with blood, and measuring altogether three pints in quantity. The cellular substance covering, as well as that connecting the psoæ muscles and the iliacus internus, was in a sloughy state. My great desire now was, to ascertain the course of this unnatural escape of urine. The kidney was large, very pale coloured, but healthy in structure; its pelvis had been dilated to a considerable extent, as was the whole course of the ureter; the latter from over distension had sloughed and burst about midway between the kidney and where it enters the bladder.

The left kidney was natural, but its pelvis and ureter were greatly distended with turbid fetid urine. The bladder and urethra were next examined. The former felt like a solid substance: on laying it open, it was found to contain a tumor as big as a large orange, the surface of which was covered with recently coagulated arterial looking blood, which being removed, exhibited layers of concentrated coagulated blood, similar to what is seen in aneurisms. After minutely examining the tumor, it was discovered to derive its origin from the prostate gland, chiefly from the middle, or third lobe. It had occasioned absorption of as much of the mucous coat of the bladder as allowed of its growing readily into the cavity of that organ; the remaining part of which was highly inflamed. A

perpendicular section was made into the tumor, which was composed principally of loose coagulated blood mixed with a white pulpy substance; but its base on the posterior part of the bladder, was of a dense, hardish consistence, and had produced a firm union and considerable thickening of that part of the muscular coat.

The fungus extended laterally, and had completely plugged up both ureters; on the right side half an inch beyond where it penetrates the muscular coat of the bladder. The prostatic urethra was nearly closed with the same growth, the remaining part of the tube being quite healthy.

In the liver there were several tubera near its surface, some as large as a gooseberry; there were also many small ones scattered through its substance; they were without cysts; those externally were not elevated, and had not the central indentation spoken of in the former Case. They were vascular, of a reddish colour, pulpy consistence, and when squeezed, exactly like the soft part of the tumor of the bladder.

There were several of those tubera in the lungs, but they did not possess capsules.

Observation.

I consider this a genuine case of fungus hæma-

todes. The tubera answer the description given by Dr. Baillie, of the soft pulpy tubercle in the lungs. And Mr. Wardrop, in his Observations on the fungus hæmatodes, says, from the description and delineation of this tubercle given by Dr. Baillie, that he is induced to consider it as having great analogy to fungus hæmatodes.

Case of Fungus Hæmatodes in the Lungs, Uterus, &c.

Mrs. B.—, fifty-two years of age, who had given birth to several children, experienced during the last six years of her life, a gradual diminution of her bodily health, in consequence of the growth of a tumor, which could be felt through the parietes of the abdomen; and previous to her death, had attained such a magnitude as to occupy that cavity nearly in the same degree that the uterus does in the last month of utero-gestation.

Several professional gentlemen saw the patient. The diversity of opinion respecting the nature of the disease was great, yet not surprising; as will be acknowledged when the result of the inspection is duly considered. The general idea was in favour of its being an ovarian enlargement, the tumor having ascended as if it arose from the pelvis, with an inclination more to one side (the left) than the other. The menstrual periods had ceased four years prior to the commencement of the swelling.

The principal seat of pain during the growth of the tumor was in the loins; but the kidneys during the progress of the disease performed their functions properly; though the urine was frequently very turbid. The bowels were irregular, but easily acted upon by small doses of castor oil.

During the last twelve months of her existence, she had been greatly distressed with a short, frequent, dry cough; pain in the chest, and dyspnœa. There was a gradual emaciation of the body, unaccompanied with hectic fever; paroxysms of dyspnœa became more frequent and violent, and she died like a person in a state of suffocation.

Dissection.

On exposing the abdominal contents, the omentum, devoid of adipose substance, was seen tightly stretched over an immense tumor, without having formed any morbid adhesions. The transverse arch of the colon passed over the anterior and middle part of the tumor, and had made a deep indentation in it: the descending arch and sigmoid flexure were greatly displaced, so as to be nearly on a line with the linea alba: the small intestines were also pushed into the right hypochondrium. The pancreas was likewise expanded into a thin substance on the upper surface of the diseased mass; the surface of the peritoneum not having suffered the least inflammation.

The next step of the dissection was to ascertain the seat and nature of the disease. It was beneath the peritoneum, about the size and figure of a large cocoa-nut with all its coverings ; and placed rather obliquely across the spine, reaching from the concavity of the left ilium to the under surface of the liver. Before the peritoneal covering was reflected from the cyst containing the tumor, which was easily done, from their being connected only by loose cellular substance, the enlargement was supposed to be a diseased condition of the kidney ; but this viscus was perfectly healthy, though forced into the iliac region by the growth which occupied its situation.

On the surface of the cyst the veins were extremely numerous, very large, and communicating with each other very freely. Some of the largest were filled with a whitish pulpy matter mixed with blood, which from its dark colour and firmness must have been coagulated for some length of time. A section was made of the diseased production ; the cyst was not very thick, its contents were composed of such a variety of heterogeneous masses, as to render accuracy of description impossible ; yet some of the parts were sufficiently distinct to afford satisfactory evidence of its belonging to the fungous species. It seemed composed of irregular portions of greyish pulpy substance, some of which were very soft, and mixed with coagulated blood. These formed the external layer of the

tumor. Into the soft portions many of the veins opened; the arteries were minute but numerous; the principal bulk of the tumor was composed of a solid gelatinous matter, and of a substance not unlike grated beef, giving the whole the appearance (if the comparison may be allowed) of a slice of rolled brawn.

The morbid action had gone on to a great extent in the lungs. They were filled, and the surfaces covered with various sized grey-coloured tubera. In several parts these had grown together, and formed large bodies, which were proved by injection to be vascular throughout.

These tubera possessed very delicate cysts, and were formed of a substance resembling the external layer of the tumor; with this difference, that they had a more fungous appearance, arising from their extreme vascularity. So small was the portion of lung capable of carrying on respiration, that I am astonished that life was preserved thus long.

The liver and other abdominal viscera were not diseased. In the substance of the uterus there were several small tubera, similar to those found in the lungs, and some of the veins were filled with matter of the same consistence, without its having formed any adhesion with their internal coats. The spermatic veins between the layers of

the peritoneum which form the ligamenta lata were greatly enlarged, and from the tortuosity of their appearance might be said to be in a varicose state: in them were found several calculi of different sizes, some as large as a garden pea. This circumstance I do not consider connected with the specific disease of which the person died; as I have met with calculi in those veins on examining pelvic viscera affected with dissimilar diseases; and I have also seen them where there was not any other morbid appearance in the pelvic contents.

Although I do not imagine the calcareous depositions met with in the above-mentioned veins, to be connected with the disease in question; yet as morbid productions, I think proper to mention the facts in the history of this dissection, and may add, that I noticed the blood in the veins containing such calculi, to be extremely thick and dark coloured, and that the various sized calculi, (from a pin's head to a pea) were in the centre of round coagula of blood, as if this fluid was the original seat of their formation.

Mr. Hodgson, in his valuable Treatise on the diseases of arteries and veins, mentions my having "met with three calculi as large as peas in the veins of the uterus." Similar concretions, that gentleman observes, "are sometimes found in dilated veins surrounding enlarged prostate glands. In such cases it is not improbable that the calculi

are formed in the surrounding parts, and make their way into the veins by progressive absorption." I can only say, I attentively examined, in the instances I have alluded to, the coats of the vessels, and found them perfectly healthy, although greatly dilated.

Case of Fungus Hæmatodes of the Liver.

Mr. B——, sixty-six years of age, much addicted to dram drinking, was attacked in May 1810, with violent vomiting of blood, attended with considerable pain in the right hypochondrium. The liver could be felt extending considerably beyond the margin of the cartilages of the ribs, and when moderate pressure with the hand was employed on examination, the pain was increased; and as he was extremely thin, inequalities of the liver could be felt through the abdominal parietes. There was not much discoloration of the skin, or conjunctivæ, although the excretions from the bowels were very unhealthy in appearance, often black; and his urine deeply tinged with bile.

He had been in an indifferent state of health for several years, without being incapacitated from attending to his business. During this time he was troubled with anorexia, a short dry cough, and obtuse pains in the left hypochondrium, attended with difficulty in keeping the bowels regular. Al-

terative doses of mercury were employed to induce a healthy action of the liver, and sulphate of magnesia to regulate the bowels, and he gradually recovered this attack, so far as to attend to his ordinary concerns. It was endeavoured, by changing his mode of living, to re-establish his health, but the organic disease was of such a nature as not to be arrested in its progress; though this was so slow, that the patient lingered on, with symptoms of a diseased state of the liver, till November 1813, when dropsy supervened, with frequent vomiting of blood. Ascites with œdema of the lower extremities increased gradually, and he dragged on a miserable existence till the 30th of March, when he refused nourishment, became comatose, vomited blood in considerable quantity, and died.

Dissection.

There were nearly two gallons of serous fluid in the abdomen. The liver was very large, and its surface irregular, with variously sized tumors, some as big as a walnut. The principal part of the covering of the convex surface of the large lobe, was converted into a thick cartilaginous substance; and there were short strong bands of adhesion between this part and the peritoneal reflexion on the diaphragm. The covering of the left lobe was only thickly coated with lymph, but several of the tubera on its surface had protruded so far exter-

nally as to cause partial absorption of that membrane, and presented a true fungous appearance.

Sections of the liver shewed that its natural structure had been changed by variously sized effusions of coagulated blood, and brain-like matter, without capsules, but retained by septa of organized lymph; and most of the blood-vessels were filled with the same kind of morbid productions.

When slight compression was made on the diseased mass, a considerable quantity of thick fluid, similar to cream, oozed from the medullary looking substance, and by maceration the whole of this part dissolved into a similar fluid, leaving the blood in a more softened state: both these being washed away, the organized lymph which held them together became visible.

The gall-bladder was thick, shrivelled, and its duct completely obliterated. There was a large coagulum of blood in the stomach, without the least abrasion of its mucous coat, but great determination of blood to its whole internal surface.

The large intestines were distended with inodorous, blackish, thick, mucous fluid, such as he had frequently voided by stool. This fluid was very adhesive, and tinged the fingers nearly as the pigment of the bronchial glands does.

Case of Fungus Hæmatodes in the Liver.

A gentleman, fifty-nine years of age, who had lived rather irregularly, had been affected with an hepatic affection upwards of four years, which could not be subdued by art, although he had had the advice of some of the most distinguished physicians in London. During the last six months of his life, he had been subject to occasional diarrhoea, with hemorrhage from the intestines. He became icterical, much emaciated, sunk gradually, and died.

Dissection.

About half a gallon of fluid was found in the abdomen; the liver was not much enlarged; its peritoneal covering considerably thickened with lymph, and in some parts cartilaginous. The structure was principally of brain-like masses, mixed with loosely coagulated blood, separated by coagulable lymph and cellular septa. That part of the liver which could be recognized as partaking of its natural structure was of a whitish colour, and upon pressure a milky fluid was discharged. Many of the veins were filled with the same substance as was observed in the liver.

The gall-bladder was empty; its coats much thickened, and its natural size greatly diminished.

Every other part of the body appeared free from disease.

Observations.

These dissections shew that fungus hæmatodes may attack an important organ, and produce death, without the specific disease diffusing itself to any other viscus.

In most organic affections of the liver, I have noticed, that nasal, stomachic, or intestinal hemorrhage, are not unfrequent occurrences; which I suppose will be considered to arise from excessive determination of blood to the mucous surfaces of those parts, and nature relieving their over distention by hæmorrhagic profluvia.

I have also had frequent opportunity of remarking the morbid sympathy that exists between the liver and large intestines, when the former is diseased or disordered: the mucous glands of the latter secreting a ropy blackish mucus, sometimes mixed with blood, which is frequently discharged by stool, and induces many persons, who have not had the opportunity of correcting their judgment by the inspection of dead bodies, to suppose that such discharges proceed originally from the liver.

Case of Fungus Hæmatodes in the Kidney.

A gentleman seventy years of age, who had been hemiplegic for six years, and had experienced for a considerable length of time a difficulty of voiding urine, which was usually tinged with blood, was seized, on the 2d of September, 1811, with retention of urine. This occasioned such distressing symptoms as obliged him to apply for assistance. I introduced into the bladder, with some difficulty, the prostate gland being enlarged, a moderate sized gum elastic catheter, and drew off the urine. From inquiry I found he had been long subject to painful retention, although not under the necessity of having recourse to surgical assistance. He had also suffered great pain in the region of the left kidney, and uneasiness about the rectum.

The effects of the last attack gradually left him, and he was in the same state he had been in for some time previous to it; *viz.* complaining of pain in the loins, and of great difficulty in evacuating the contents of the bladder. A bougie was occasionally introduced, and his bowels kept gently open. In January, 1812, he had a fit of apoplexy, from the effects of which he never recovered.

Dissection.

There was considerable effusion of serous fluid

between the tunica arachnoidea and pia mater; the vessels of the brain were very turgid, but there was not the least sign of recent effusion of blood, or of old apoplectic cells. The lateral ventricles were greatly distended with serous fluid tinged with blood; and the basilar artery as well as the carotids were partly ossified.

The thoracic and abdominal contents were natural, except the left kidney, which was considerably enlarged, and its superior half had the appearance which is observed in fungus hæmatodes. The bladder was of an enormous capacity, and its muscular coat greatly thickened; there were several sacculi of protrusions of the mucus through the membranous coat; the middle lobe of the prostate gland was much increased in bulk, and projected forwards: acting as an imperfect valve when the bladder was full of urine, and thus causing the difficulty he experienced in expelling the contents.

Case of Fungus Hæmatodes in the Kidnies.

Miss S. J——s, twenty-one years of age, with delicate constitution, dark hair, and sallow complexion, who had experienced favourably the infantile diseases at an early part of her life, and from the age of fifteen had menstruated with regularity as to time and quantity, was, on the 26th of September, 1810, suddenly attacked, about a week pre-

vious to the regular period, with frequent desire to relieve the bladder, and in the course of a few hours an amazing quantity of limpid urine was discharged, without allaying the urgent propensity to void more. The irritability of the bladder increased, and arterial looking blood was discharged in considerable quantity ; but as there was great uterine irritation, it could not easily be ascertained from whence the hæmorrhagy proceeded.

From the loss of blood, and violence of the pain, she became extremely pale ; pulse small and very rapid, and the mind much agitated ; but there was not the least disposition to syncope. The patient was ordered to be lightly covered with bed-clothes, and the most cooling diet to be employed ; and cloths wrung from vinegar and water were to be applied, as in cases of profuse uterine hæmorrhage. The bowels, which were confined, were relieved freely by neutral salts ; and cerussa acetata cum opio, were given to lessen the hæmorrhagic action.

September 27th. The violence of the symptoms was somewhat abated ; but the greatest distress arose from an incapacity of discharging the contents of the bladder. Having suffered most excruciating pain, I was, after making repeated solicitations, permitted to introduce a catheter, and to my astonishment, drew off nearly a pint and a half

of what appeared chiefly blood; but after coagulation, the serous part, which bore a small proportion, evidently contained urine, which could be detected by its odour. Great relief was afforded by this operation, and it proved satisfactorily to my mind, that the uterus did not participate in the hæmorrhage.

September 28th. There had not been any evacuation from the bladder, although the propensity to effect this had been very urgent, and the pain extremely severe. The catheter was again introduced, and upwards of a pint of bright coloured bloody fluid was discharged, which afforded almost instantaneous cessation of pain. The bowels were kept relaxed. Pills repeated, and the refrigerating plan pursued.

September 29th. The irritation of the bladder was violent, its contractile efforts frequent, and a considerable quantity of bloody fluid was discharged, which mitigated for a short time her sufferings. From this date to the 10th of October, the symptoms were much similar to those last described; but in addition to them there was the regular menstrual evacuation in increased quantity, accompanied with frequent bilious vomiting. The pills were now discontinued, infusion of roses with Kino prescribed; and as the bowels were irregular, and the evacuations always dark-coloured, and ex-

tremely foetid, alterative doses of mercury were given, and sulphate of magnesia to regulate them.

From the violence and continuance of the hæmorrhage, and frequent sickness, it was supposed by all who saw the patient, that the powers of her constitution would give way, and that she would not survive; she certainly did exhibit a most ghastly appearance, but her spirits remained remarkably good; and although she often vomited, she retained a considerable quantity of nourishment, and her appetite was unaffected.

The catamenial period was completed by the 13th of October; the irritation of the bladder was more moderate, but the discharge from it was profuse, and always mixed with a great proportion of blood, which mostly coagulated with the cooling of the fluid.

The irritability of the bladder and stomach gradually subsided, as also the hæmorrhage, and she was six weeks after the commencement of the disease in a convalescent state, but surprisingly emaciated and enervated. After the urine ceased to be tinged with blood, it became very turbid, and deposited a sediment like pus and mucus.

There was not any material alteration in the symptoms, but progressive improvement of health

until the 10th of November, when she was again attacked with bilious vomiting, and her bowels became irregular in their functions, and the excretions were dark-coloured. She likewise complained of a dull pain in the right side, which she said she had experienced occasionally for a considerable length of time previously to her last illness, and that she could feel an enlargement on that side ; but as she had not suffered much pain, she never thought it necessary to mention these circumstances. On examination I distinctly felt a tumor in this hypochondrium, projecting beyond the cartilages of the ribs, and I could trace it into the iliac region. Pressure increased the pain, and there was considerable pulsation in the part.

Dr. Haighton visited the patient a few times, and made the strictest inquiry and examination into the symptoms ; but confessed that the nature of the tumor, and the cause of the hæmorrhage, were so equivocal as to render it impossible to form a correct diagnosis. From the last-mentioned symptoms, the liver was supposed to be diseased ; alterative doses of mercury were prescribed ; the state of the bowels strictly attended to ; and a discharge by blistering was established near the diseased part. Under this mode of treatment her health improved ; but she continued to feel a dull pain in the tumor, and its bulk and pulsation were not diminished.

On the 17th of May, 1811, another attack of hæmorrhage with bilious vomiting came on, exactly similar to the one described, which continued nearly the same length of time, although every endeavour our art could devise was employed. The tumor had evidently increased in size, and the pulsation was more distinct. She gradually recovered from this severe trial, but looked very wan, and was subject to cold perspirations.

April 1812. The bulk of the tumor had augmented considerably, although leeches and repeated blisters had been employed, and the pulsation in it was more distinct; the enlargement could be traced from the margin of the ribs to the lumbar region, and as low as the spine of the ilium; this examination, with the former symptoms, led me to conclude, what I had long expected, that the kidney was the diseased part, and that, in all probability, the affection was of the fungoid kind.

During this interval of exemption from hæmorrhage, her health remained tolerably good, although she complained frequently of pain in the tumor, loins, and along the course of the spine of the ilium.

In June 1812, she complained of pain in the abdomen, attended with distention, and of a numbness of the right thigh and leg. On the 20th of this month, the discharge of blood from the

bladder re-appeared, as did also the bilious vomitings, which, in the course of a week, threatened destruction of life; but they subsided, and her powers again rallied. In November, 1812; October, 1813; February and April, 1814; January and May, 1815, she suffered attacks bearing such affinity with those already described, that I think it needless to relate them; but I consider it proper to mention, that during the specified times, the tumor enlarged, it continued to pulsate, and was decidedly diminished after each hæmorrhage. Her pulse was always very small, and when she was free from the discharge of blood, she had, even in the coldest weather, profuse cold perspirations.

Dr. Farre, to oblige me, visited the patient, and sanctioned my opinion of the seat of the disease, but did not feel disposed to agree to its having any alliance to fungus hæmatodes, as he imagined this disease not likely to exist such a number of years without destroying life.

January 4th, 1816, her abdomen began to enlarge, and there was great pain in the tumor; she also vomited violently. The pulsation could now be felt as if it were from an artery of considerable size, immediately beneath the parietes of the abdomen, and across the upper part of the abdomen; and it frequently produced not only to the patient's feelings, but to those who made examination, a thrilling sensation. On the 11th of this month,

she experienced great uneasiness in the hypogastrium ; her bladder was extremely irritable, and she had almost constant desire to relieve that organ. So violent were the efforts, that they resembled those produced by a calculus in the bladder, and were accompanied with the sensation of prolapsus uteri. A catheter was introduced, and upwards of a pint of thick bloody fluid was drawn off, which soon produced ease, but only of temporary duration, for in the course of a few hours the symptoms recurred, but she was able to relieve herself; the discharge consisting chiefly of blood. These symptoms continued to distress her more than a week, and the quantity of blood lost was greater than I could have thought possible for a human being to have sustained. The patient was more reduced by this attack than by any of the former; she possessed great fortitude, and her spirits, under the severity of her affliction, were most remarkably good.

Although the discharge of blood had been so profuse, the tumor was not diminished as in the former instances, but seemed to occupy the chief part of the abdomen. - There was frequent bilious vomiting, and the discharge from the bladder was thick, turbid urine, frequently mixed with blood ; and sometimes she suffered great pain by the passing of coagula, which often occasioned retention of urine. There was great difficulty in keeping the bowels open.

The urine ceased to be charged with blood about the 27th of February, 1816, but it was mostly thick, and occasionally mixed with a fluid similar to cream. After this abdominal enlargement increased, and the tumor and its irregularities could be easily traced. On the 4th of March she had violent rigors, succeeded by heat of the skin, and thirst; and her tongue was very white. The rigors came on two or three times a day, and were always succeeded by extreme heat of the skin, without terminating in perspiration. These symptoms, with frequent bilious vomiting, continued till the 11th. On the 18th her abdomen increased rapidly; pulse 140 in a minute, and extremely small; she was restless, very anxious, and for the first time during her illness, gave up all hope of recovery; to my astonishment she lived till the 25th of March, 1816. During this time the secretion of urine was small in quantity, and her bowels could only be emptied by the aid of enemas.

I fear the history of this case will be thought too prolix, although I have omitted stating the variety of curative means employed, as I am confident none had any effect in arresting the organic disease.

Mr. Webb, Mr. Knight, and Mr. Kingdon, surgeons, were present at the examination of the body after death. On opening the abdomen, the right

kidney, which formed the principal part of the disease, seemed to occupy the greatest portion of that cavity. The inferior part of the diseased mass rested in the concavity of the ilium, and the superior pressed closely against the under surface of the large lobe of the liver, and partly beneath the left, compressing the gall-bladder, and gall-ducts. In consequence of the magnitude of the tumor, the intestines were greatly displaced, but not diseased. The serous surface of the peritoneum in several parts had a purple tint; also the omentum, and the mesenteric glands were of the same colour, but were not enlarged, nor was their structure changed.

The liver was pale-coloured, but not unhealthy. The spleen much enlarged, and firmer than natural. The pelvic contents, also the thoracic, were particularly healthy.

The kidneys were removed for more minute investigation; the right, with a portion of the liver, which adhered, weighed eleven pounds thirteen ounces; the left twelve ounces. The large one was formed into irregular sized protuberances, with the exception of a small portion, which retained the character of kidney; and the peritoneal surface was greatly condensed.

That part of the tumor which formed its principal bulk, was cut open. It contained a coagu-

lum of blood, not adhering to the sac; which weighed three pounds, and it was composed of concentrated layers, in different states of solidity, similar to what we notice in an aneurism which has formed rapidly. There were also nearly two pints of fluid in the cyst, which appeared like half dissolved blood mixed with pus. The parietes of the sac were produced by a thickened condition of the proper capsule of the kidney and its peritoneal covering. Its internal surface presented a very ragged flocculent appearance, which was found to arise from coagulated lymph, and numerous long delicate blood-vessels, the external coats of which were covered with lymph.

The remaining parts of the disease were tubera of various sizes, some two inches and a half in diameter; they were in that part of the kidney not covered with peritoneum, and they seemed retained by capsula propria. When this was removed, their arrangement had the lobulated appearance of a recent human placenta; their contents were coagulated blood and lymph, with a most surprising number of long minute blood-vessels, coated with lymph, which when freed from the blood had a tomentose appearance.

The large veins were filled with pulpy substance mixed with blood and lymph, which did not adhere to their coats. The abdominal aorta was remarkably small, but the renal arteries were large;

each nearly equal to a moderate sized carotid. From the trunk of this vessel coarse injection was thrown in, which afforded an opportunity of tracing its distributions, and also of ascertaining those branches which poured their blood into the sac. On dissection it was found that the trunk of the artery divided, as it generally does, into two branches; but they were each as large as the trunk from which they originated; one going under and into the diseased part, the other passing immediately beneath the sac of the tumor, and both anastomosing largely. The waxen injection was seen to enter the sac through numerous small open-mouthed arteries, which came from this branch of the renal, and satisfactorily accounted for the repeated hæmorrhages during the patient's life.

The ureter was not much enlarged; when water was injected through it, the fluid entered the cyst which contained the blood. The left kidney possessed only a small portion of its natural structure, the other part being occupied by pulpy tubera, which were rendered red by minute injection.

APPENDIX

CONTAINING

TWO CASES OF ANALOGOUS AFFECTIONS,

BY WILLIAM LAWRENCE, Esq. F.R.S. &c. &c.

CASE I.

Charles Murdoch, forty-three years old, who had been a soldier, and had always enjoyed perfect health and strength, was received into Saint Bartholomew's Hospital in January, 1816, for a large tumor in the left armpit. He had felt a small kernel there for two years; but it had not caused him the slightest uneasiness or inconvenience; during the last six weeks it had been painful, and increased to the size of a middling orange. It was imbedded in the axilla, raising the pectoral muscle in front, and the latissimus dorsi behind, forming only a small convex prominence between the axillary margins of these muscles. It was firm and tense. In the operation of extirpation which I performed on the 6th of January, the tumor was found to be nearly spherical; to be in contact with the axillary artery and vein, and to be surrounded by a loose and perfectly healthy cellular substance. Its surface, covered by a thin, whitish, and closely adherent capsule, presented some inconsiderable irregularities; the largest of which occupied the

most superficial part of the swelling, and contained a coagulum of blood. The substance was compact and firm, with a light reddish brown tint throughout, and interspersed with small points of blood, so as to convey the idea of considerable vascularity. The texture was nearly homogeneous; a section, however, presented an obscure appearance of division into lobes; and on scraping it, some soft pulpy matter came away on the knife, leaving a firmer substance behind.

The rapid increase and situation of this tumor, together with its occurrence in an individual of such an age, and a constitution apparently so healthy, could not fail to excite suspicions of its nature; and these were so much corroborated by the subsequent examination of its texture, that I expressed to the pupils my strong apprehensions, that the case would end fatally, either from reproduction of disease in the part, or from affection of the internal organs. The wound of the operation, however, went on favourably; not only had it perfectly healed, but the patient's strength was so entirely restored, that he returned to his work on the 18th of February, with a particular injunction to come back to the hospital, if he should again become unwell.

He was re-admitted on the 25th of May, with a large newly formed mass in the axilla, which he had first noticed seven weeks before, about the

size of a walnut ; with two or three painful moveable tubercles, situated over the cartilaginous border of the chest on the left side ; with a most troublesome cough, and shortness of breath, and considerable general constitutional affection.

The new tumor in the armpit occupied the whole space between the chest, scapula, and pectoral muscles ; its surface consisted of irregularly projecting tubercular masses, in the middle of which, the cicatrix of the wound formed a depression.

In a short time, numerous tumors shewed themselves in other parts of the body, unattended with pain, insomuch that they were, in a manner, accidentally discovered. A string of tubercles, moveable under the skin, (which was not in the least discoloured,) and as large as walnuts, occupied the inner side of the right thigh ; a similar series, rather smaller, appeared on the front and outside of the left ; and some others were on the left haunch. Several hard knots, of the size of horse-beans, were found in the skin of the left and back part of the neck ; there were at least eight or ten. A greater number of similar knots (from twelve to eighteen,) occupied the left and upper part of the scalp ; and there was one in the right frontal region. The tubercles last-mentioned appeared to be in the skin, which was red, and sore when touched by the comb.

The disease on the chest slowly increased in every direction ; and underwent no other change, except that the integuments on three or four of the round convex protuberances towards the axilla, assumed a reddish livid hue, with small vessels ramifying over them, and these parts had an elastic feel, as if from a deep-seated fluid.

The cough and dyspnœa, although much quieted and lessened by rest and soothing medicines, were occasionally very troublesome. There was no symptom of disease in any other organ except the lungs ; the pulse being regular, the functions of the bowels well performed with the assistance of occasional purgatives, and the abdomen in all parts free from pain on pressure. He died on the 16th July, after less suffering and exhaustion than might have been anticipated.

Dissection.

The basis of the axillary tumor described a circle of about six inches diameter ; it filled the whole cavity down to the ribs, with which it was in close apposition. The surface of the mass was uneven, and rose into large rounded protuberances ; and the interior, when cut, had a lobulated appearance. It exhibited a mixture of soft white or reddish medullary matter, with a few masses of bloody coagula, and septa of firmer texture. The

axillary vessels, nerves, and muscles, were enveloped in the disease, but did not partake of it.

The femoral tubercles were depositions of similar soft white matter, in the centre of different muscles, of which the texture appeared in other respects perfectly natural.

In the neck and scalp this matter was deposited in the texture of the skin.

The tubercles on the cartilages of the ribs were under the skin, and extended in a small cluster on the internal surface of the abdominal muscles and diaphragm.

The lungs contained myriads of tubercles, scattered over every part of their surface and substance, and varying in size from that of a pin's head, to that of a small apple. The largest were in the lungs themselves; they were white; particularly in contrast with the livid lung, and had a lobular appearance when divided. They consisted of a very loose cellular and vascular tissue, with a soft white matter, marked with small black striæ, and spots of coagulated blood, in colour and consistence very much resembling the brain of the foetus. This soft substance could with ease be entirely expressed, leaving an empty cell. The thin edges of the pulmonary lobes were fringed

with innumerable small reddish tubercles, and the pleura was, in a large portion of its surface, covered with similar ones not larger than millet seeds.

A series of large tumors occupied the base of the heart, and the posterior mediastinum. These exhibited the medullary structure internally, and the natural texture of the absorbent glands on the outside.

In the muscular substance of the left ventricle of the heart, there were a few small depositions, not larger than peas, without any surrounding inflammation, or other change of structure.

Some small masses of the same kind of soft medullary matter occurred in the liver, and in both kidneys; numerous ones in the coats of the small intestine, that is, on the outer surface of the mucous membrane; and a very large and some smaller in the spleen.

The contents of the cranium were free from disease, nor was any bone affected.

The soft matter was very nearly alike in all the various situations which it occupied. It could be very easily expressed from the cells that contained it; in consistence it was like softened brain; and a portion of it removed and viewed alone,

could not have been distinguished from cerebral substance.

CASE II.

Having mislaid the notes of the second case, I am not able to give a detailed account of it; but the following outline comprehends the most important particulars.

Richard Smith, aged twenty-two, was admitted into Saint Bartholomew's Hospital, on the 30th of May, for a disease of the testis, which had existed some months.

The swelling equalled in size two fists, had an elongated oval shape; was perfectly uniform in its surface, and firm, but rather elastic to the feel. The cord was enlarged up to the ring, and a considerable tumor could be felt within the abdominal muscles. This patient was in a bad state of health, considerably reduced in flesh, and had a sickly, anxious, and worn appearance, strongly indicating internal disorder.

Before his death, which occurred on the 27th of July, the abdomen had enlarged considerably, and he had suffered great constitutional disturbance; first from an affection of his stomach, accompanied with bilious vomiting, and then from

peritonitis requiring active antiphlogistic treatment.

In the pulpy texture of the original disease, and in the deposition of a similar soft substance in many other parts of the body, this case proved on dissection to be analogous to the foregoing.

Not a vestige of the natural structure of the testis remained. The swelling owed its firmness and uniform exterior to the coats of the gland, which were filled with a soft matter of white, reddish, or brownish colour, traversed by rather firmer cellular partitions. A tumor in the cord, just within the abdominal parietes, had the same structure.

The cavity of the abdomen exhibited slight marks of recent inflammation. The omentum was converted into a congeries of soft tubercles, of the size of grapes, adherent about the pelvis, where they were intermixed with a considerable quantity of recently effused and coagulated blood. These tubercles were of a light and slight red tint, and so soft, that although the body was examined in a few hours after death, and was perfectly fresh, they gave way to the fingers in every direction, in attempting to remove them.

A mass of the same soft matter, as large as a man's head, lay on the spine, behind all the vis-

cera, and also behind the aorta and vena cava. The latter vessel was closed from the termination of venal veins downwards, and the obliteration extended along the primary and external iliac veins.

At one point the coats of the vena cava had been absorbed, and the pulpy substance of the tumor projected into the tube. This circumstance led me to advert particularly to the spermatic veins, which I believe must have been obliterated, for I could discover only one or two small twigs in the cord.

The cavity of the pelvis was filled by a similar deposition, surrounding the viscera, but not affecting their texture.

There were a few small portions in the liver.

The lungs were occupied by numerous soft tubercles of various sizes; and the glands at the basis of the heart, and about the division of the trachea, were enlarged to the bulk of small apples. They contained the pulpy matter internally, surrounded by a structure exhibiting the natural appearance of the gland; and some of them had large cells filled with fluid blood.