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Cases of Cystic Tumors of the Abdomen and Pelvis

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BOSTON, MASS.

REPRINT FROM VOLUME I

Gynecological Transactions

1876

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CASES OF CYSTIC TUMORS OF THE ABDOMEN AND PELVIS.

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CASE I. Mrs. H., aged thirty-nine, a resident of Boston, consulted Dr. Mack, of St. Catherine's, Ontario, for an obscure pelvic tumor. On the following day I was called in consultation. The patient was of dark complexion and nervous temperament. Menstruation, which first appeared at eighteen, and recurred at intervals of three weeks, was scanty and painless. In her youth she was unusually fond of out-of-door sports, and later in life indulged in horseback exercise. She was married at twenty-two, and supposed she miscarried two years later. Seven years previously, while under the care of Professor Byford for uterine disease, she became the subject of hematocele, but shortly after passed out of his hands. For two years, Mrs. H. had been suffering from a peculiar pain in the left ovarian region, and also from renal and vesical derangements. She described the pain as occurring in paroxysms, at first light, gradually increasing in intensity, until almost insupportable, then as gradually subsiding. Soon after the occurrence of the above symptoms, her attention was directed to a tumor the size of a small orange at the seat of the pain. In the dorsal position, with limbs flexed, percussion gave evidence of a well defined dullness in the left ovarian and super-pubic regions, and by bimanual palpitation, unmistakable fluctuation. The uterus was fixed and lateroverted to the right; its cavity two and one half inches in depth. Exploratory puncture (through Douglas's fossa) with a small trocar by Dr. Mack, confirmed the existence of fluid. Three pints of a light,

straw-colored serum were withdrawn by aspiration, which completely emptied the cyst. The result of an analysis by Dr. Fitz, of Boston, was as follows: "A clear, light, reddish-brown, odorless, slightly alkaline fluid, sp. gr. 1020; absence of sediment; abundance of albumen, it becoming solid on boiling; abundant chlorides and sulphates. Microscope reveals numerous oil globules, a few round cells with large nuclei, and a small amount of granular protoplasm; an occasional granular corpuscle. If it be a question between ascitic, or ovarian, the latter is probable." Notwithstanding this result, we were disposed to consider the case one of encysted dropsy of the peritoneum following hematocele. Being now intrusted to my care, she was ordered rest in bed; no treatment. Not the slightest reaction followed the operation, and in the course of three weeks she resumed her ordinary duties.

Dr. Mack was disposed to attribute much of the pain, as well as the renal derangements, to pressure upon the nervous filaments of the tissues in the vicinity of the cyst. The description of the pain, and the renal and vesical symptoms, were at least suggestive of some interference with the functions of the ureter by pressure from the cyst.

The following letter from Dr. Byford, received since the operation, tended to confirm the diagnosis: "Dear Doctor, I can emphatically indorse your diagnosis and proposed treatment. In my own practice, I have met with but two cases of serous accumulation after hematocele. One was cured by a single tapping with the aspirator, the other by merely establishing a permanent drain from the cavity. In the last case, re-accumulation took place; I then punctured with a large trocar, and passed through the canula a flexible catheter, and left it in position. The cure was effected in about three weeks by simply passing a probe through the opening to prevent it from closing. Gradual contraction and obliteration took place without any local or constitutional disturbance. I should be inclined to repeat this method rather than inject the cavity."

I am also indebted to Dr. Byford for the history of the

following case, which came under his observation, in the practice of Dr. H. Webster Jones, of Chicago: —

"Mrs. S. D., when about sixteen years of age, after exposure upon a skating frolic, experienced suppression of the menses, became chlorotic, and remained so for months, meantime suffering from a large chronic abscess of the right thigh, which confined her to the house for nearly a year. During this detention she became irregularly and scantily 'unwell,' but grew into a more and more normal state during subsequent years, until at twenty-two she married. At this time menstruation was regular, but scant and protracted in its manifestation.

"A few weeks after marriage she was seized with a supposed peritonitis, acute in inception, but prolonged as to results, so as to leave her feeble, and incapable of exercise, nervous, and with frequent and oppressive pelvic pains, which were always aggravated at menstrual seasons. In August, 1873, I was first called to her, when she had been already invalided about two years. My observations then included a cachectic aspect, a cold, clammy skin, a feeble and rapid pulse, great general excitability, and limited ability to endure exercise, either in walking or the carriage. Indeed, her determination alone kept Mrs. S. from being bedridden. Inquiry disclosed chronic rectitis, and vaginal exploration revealed a soft fluctuating tumor occupying the region of Douglas's cul-de-sac, pushing the uterus forward and downward, perceptible externally in front of the sacral promontory. Three hypotheses arose concerning the nature of this tumor; first, it might be a cyst of the broad ligament; second, an ovarian cyst; or third, an abscess arising from an old hematoma. The decision as to what was to be done with it, was left with Professor Byford, who examined the case with me August 24, 1873, and punctured the tumor through the vagina with the aspirator needle. The fluid withdrawn (about a pint and a half) was clear, inodorous, sp. gr. 1030, and contained little or no albumen. No tumor remained, and the uterus resumed its place. By the 9th of September it had refilled, to the great annoyance of the pa-

tient, who had experienced great relief from the operation. On that day Professor Byford punctured the sac with a curved trocar, withdrew a half pint of thin, ill-smelling, semi-purulent serum, which was highly albuminous. A flexible catheter was introduced through the canula, and through the former daily injections of iodine water, and other mild, disinfecting fluids, were given till the 20th of October, when the tubes could no longer be retained, or the orifice be penetrated. Small discharges of pus occurred spontaneously in November, December, and February, preceded by a few days of fever and pelvic pains, since which Mrs. S. has steadily improved in health."

The literature of the subject of encysted dropsy of the peritoneum, is extremely meagre.

Under the head of "Heterologous Formations, and an Anomalous Occurrence of Cellular and Serous Tissue," Rokitansky[1] thus observes: "This appears on the peritoneum in the shape of the above mentioned organizing processes of a plastic character, and especially as serous cysts, in which case the pseudo-membrane includes, during its organization, a portion of the fluid exudation, and receives an internal serous investment. Such bladders are either connected with the peritoneum by means of a neck or stalk, or adhere to it by a broad base. In rare cases we find cysts with various contents, as new formations on certain portions of the peritoneum, and then frequently on the omentum."

Dr. Peaslee, in his work on Ovarian Tumors,[2] under the head of "Encysted Dropsy of the Peritoneum," speaks of this affection as being extremely rare, two cases only having come under his observation, one in each sex. Boinet[3] has seen three cases, two in men, and one in a woman. Dr. Peaslee says: "The disease is preceded and produced by peritonitis. The fluid lies above (in front of) the intestines, the latter being bound down by adhesions, and sometimes

[1] *Pathological Anatomy*, vol. ii., p. 28, 1855.
[2] *Ovarian Tumors*, p. 155, 1872.
[3] *Traité pratique des Maladies des Ovaires*, Paris, 1867, p. 168.

extends over the whole anterior aspect of the abdomen, being divided into several divisions ; while in other cases it is bounded by narrow limits. Depressions are sometimes felt on the surface corresponding to the dissepiments, if there be any. The abdomen is not prominent, but flat. Fluctuation is weak and limited, and does not change its relations in changing the position of the patient. It does not interfere with respiration or digestion, like an ovarian cyst, and is never attended by edema of the lower extremities, or enlargement of the abdominal veins."

Mr. T. Spencer Wells [1] made an exploratory incision in a case of this kind, evacuated the cyst, and the patient recovered. Dr. Washington L. Atlee, under the head of "Peritoneal Inflammatory Cysts," [2] prefaces the history of two interesting cases as follows: "In this particular form of cysts, the inflammation is localized in a part of the peritoneum, or of the sub-peritoneal tissues, and is followed by an effusion of fluid, which is imprisoned in pockets formed by an agglutination of the serous surfaces, or accumulates in the areolar tissue, and separates large portions of the peritoneum from their attachments ; thus, in either case, forming a cystic tumor, which is difficult to distinguish from an ordinary ovarian cyst. This is a very different state of things from that which occurs in ascites, or which is associated with tubercular peritonitis, as the fluid does not occupy the whole peritoneal cavity, but is inclosed within a distinct cyst, which is projected into the general cavity of the abdomen. So far as my experience goes, these inflammatory cysts originate in the region of the pelvis. The locality of the disease, therefore, corresponds with that of an ovarian tumor, — hence the difficulty of diagnosis is increased. The inflammatory cyst, however, is sensitive to pressure, and more or less immovable. It is accompanied, also, by pain, great constitutional disturbance, emaciation, and the usual symptoms of acute disease. An ovarian cyst, unless in a state of inflammation, is usually free from tenderness, is more or less

[1] *Med. Chirug. Trans.*, vol. lxv., Case 5.

[2] *Ovarian Tumors*, p. 160.

movable, and does not so rapidly impair the general health. Still, there are cases even of ovarian cysts, which, in their origin and progress, partake of the acute character of the peritoneal inflammatory cyst, and cause as rapid a depreciation of the vital powers. The inflammatory cyst, like the ovarian, is sometimes submerged in ascitic fluid. Whenever doubt exists respecting the nature of the disease, tapping may be resorted to, and the diagnosis may be made by an examination of the fluid. Should gastrotomy be undertaken in a case of inflammatory cyst, the operator will soon perceive, on exposing it, that he has not encountered an ovarian tumor. Instead of the dense, shining, white surface of an ovarian cyst, or the pink-reddish color of a fibro-cyst, he will see a dull, brownish-colored tumor, having an extensive area of attachments, non-pedunculate, whose removal will be found to be impossible." Dr. Robert Barnes,[1] in his work on "Diseases of Women," thus writes: "There is a form of encysted dropsy, the result of peritonitis, in which the peritoneum of the pelvic organs may or may not be involved. Peritonitis may be greatly limited to a portion of the omentum, and of the small intestines covered by it. Plastic matter may be so thrown out as to form a cavity or cyst between these parts in which serum is imprisoned. I saw a case which I concluded to be of this kind some years ago in consultation with Dr. Clapton and Mr. Litchfield, of Twickenham. There was a large tumor in the right flank, passing across the median line, and giving fluctuation, which could be traced downwards to the iliac fossa. It had been looked upon as certainly ovarian. The circumstances that made me doubt were the rapidity with which the tumor had formed; the severe attendant pain, and history of fever; a certain singular thickness and doughiness of part of the walls; and the more marked lateral site of the tumor than is usually found in ovarian cysts. I punctured the cyst, and in doing so it required some confidence in one's diagnosis, for the trocar had to be made to penetrate considerably deeper than is usually necessary in the case of ovarian

[1] *Medical and Surgical Diseases of Women*, Phila., 1874, p. 318.

cysts, which lie close behind the abdominal wall. A quart or more of horribly stinking putrid serum escaped, so that we suspected there had been a perforation of the intestine into the peritoneum as the cause of the inflammation. The entire disappearance of the tumor and recovery of the patient lent confirmation of the diagnosis arrived at. In encysted dropsy, the serum drawn off will coagulate by heat, or sometimes without."

Encysted dropsy of the peritoneum may also exist as a reliquium of retro-uterine hematocele. We gather from these varied experiences the following conclusions, namely, that encysted dropsy of the peritoneum is a rare affection; is preceded by peritonitis and pelvic hematocele; is situated more frequently in the pelvis, laterally, centrally, or both, at the same time; may coexist with general ascitis; is attended or not with grave constitutional symptoms; that the contents of the cyst are generally serum, having the ordinary characteristics of ascitic fluid, or of a purulent, offensive nature. The treatment in the first class has been by simple evacuation and abdominal section, in the second, by drainage, disinfecting injections, etc.

Case II. Mrs. M., aged 54, a native of Connecticut, was referred to me by the late Dr. Trailor of Cape Girardeau, Mo., for an obscure abdominal tumor. The patient was of medium stature, dark complexion, sallow and emaciated. Her mother died of diabetes. Menstruation appeared in the eleventh year, was irregular the first few months, and vicarious from the nose and lungs from the thirteenth to the fifteenth year. She was married at twenty-two, gave birth to five living children, had two miscarriages with twins within a year, both of which were attended with profuse hemorrhage. The children were all nursed not far from nine months. The climacteric was reached at the age of fifty. The last twenty years of her life were spent in a highly malarious region. She had always suffered from chronic hepatic derangements, more especially since her residence in the West. The last six years her disease assumed an intermittent character, with a tendency to chronic

diarrhea. In 1873, her attention was directed to a prominence, the size of a small orange, in the right hepatic region, immediately below the diaphragm. The tumor increased slowly but steadily, and when seen by Dr. Trailor, in 1875, had nearly reached the ovarian region, being about the size of a fetal head.

I saw the patient in November of the same year. The abdomen was generally enlarged, measuring twenty-four inches in circumference; superficial palpation showed a sharply defined, ovoid-shaped, fluctuating tumor in the right ovarian region, extending upward toward the diaphragm. The area of dullness measured eight inches in length, by five in width, and was well defined, showing the tumor to be a smooth, spherical body, confined to one side; on palpation and gentle pressure, a peculiar crepitant sensation, quite audible, was imparted to the touch, that suggested the confinement of air in cellular tissue. These sounds did not vary upon a change of position. By bimanual palpation the signs of fluctuation were very indistinct through Douglas's fossa. The uterus, in a condition of senile atrophy, moved easily in all directions, and was apparently unconnected with the tumor. I removed by aspiration, through the abdominal walls, a few ounces of the contents. The fluid was of a yellow-brown color, and held in suspension a large number of glistening crystals.

Report of the analysis by Dr. Fitz: "Yellow color, with exception of numerous glistening specks, which proved to be cholesterine crystals. Sp. gr. 1022, absence of coagula; a white, flocculent sediment, mainly cholesterine. There was an abundance of albumen. The microscope showed occasional round cells, and many others of the same size fatty degenerated; granular corpuscles; swollen lymphoid cells, to a moderate extent, and a few corpuscles. The fluid might come from an ovarian cyst, the dermoid character of which is possible, though not probable, as hairs and scaly epithelium were wanting. Diagnosis, probably ovarian." Two weeks after this date, Dr. Kimball saw the case with me, and suggested a complete evacuation with the aspirator.

This was accordingly done, and five pints of fluid withdrawn, similar in quality to that of the former occasion. The extreme emaciation rendered an exploration of the abdominal and pelvic cavities unusually favorable. The collapsed abdominal wall felt precisely like soft leather.

After repeated attempts, bimanually and otherwise, not the slightest trace of the tumor could be felt. No reaction followed the operation. She kept her bed ten days or more, then resumed her accustomed duties, with a decided improvement in her general health. I subsequently saw the patient as often as once in two weeks; on each occasion a careful examination was instituted, but without result. Ten months after the operation, a prolonged examination failed to detect any sign of refilling, but in the vicinity of the former seat of the tumor, and along the course of the descending colon, on deep pressure, an indurated condition was detected. This was no doubt occasioned by a chronic diarrhea of years' standing, possibly in part by the relics of the tumor. The clinical history of the affection rendered the diagnosis extremely doubtful.

With a view to arriving at the true nature of the affection, a brief review of the differential diagnosis of abdominal and pelvic tumors is submitted as follows: As proved by aspiration, we have had to do with a cavity containing fluid, which fact of course excludes solid tumors such as uterine fibroid, prolapsed ovary, and fecal impaction. The nature of the fluid excludes over-distended bladder, hematocele, pelvic abscess, and probably uterine fibro-cyst, hydronephrosis, cyst of the broad ligament, and dropsy of the Fallopian tube. The absence of the characteristic signs of renal, cardiac, and tuberculous affections, and of malignant disease of the ovaries or other abdominal viscera, namely, cachexia, edema, gastric derangements, deposits in the lymphatic system, blood in the fluid in the later stages; the localization of the fluid in an immovable sac, excludes general ascites. As regards the nature of the fluid, while in a vast majority of cases the presence of cholesterine may be considered as pathognomonic of ovarian disease, the fact

should not be lost sight of that this element has been found certainly in hepatic cysts,[1] if not in other abdominal tumors than ovarian. This evidence, then, becomes doubtful in the present case. Again the failure to reaccumulate becomes also a doubtful sign, since cases are recorded where three years have elapsed from the date of complete evacuation of an ovarian cyst, until its reaccumulation.[2]

These doubtful facts, and other points in the history of the case, are unfavorable to either ovarian disease or encysted dropsy of the peritoneum. In the course of the preparation of this paper, while glancing over the general subject of abdominal and pelvic tumors, under the head of Hepatic Cyst (in Dr. Atlee's work on "Ovarian Tumors"), Case XXXVIII., I was struck by the similarity of symptoms, and the mystery in regard to my case seemed immediately solved; the tumor in my case being much smaller. By way of comparison, I will give a brief synopsis of Dr. Atlee's case.

The patient was middle aged. Had exhibited signs of dropsy, for the relief of which tapping was recommended. When the patient presented herself to Dr. Atlee, she was emaciated, cachectic, and icteroid. The abdominal enlargement was greater than at term, but not so symmetrical in shape. The shape of the abdomen did not vary by changing the position of the body. On pressure over the right portion of the umbilical region, there was a peculiar crepitation resembling that of air in the cellular tissue, and which was quite audible, per vaginam. The pelvis was found to be occupied by an elastic body. The sac was tapped, and twenty-seven pints of cider-colored fluid withdrawn. An oleaginous stratum floated upon its surface, and was found to be made up of innumerable shining particles like crystals or spangles. By the microscope, these last were found to be cholesterine. The day after the tapping, a careful examination failed to give any satisfactory evidence as to the existence of an ovarian tumor. The skin of the abdomen was of

[1] Atlee, *Ovarian Tumors*, 133.

[2] *Boston Medical and Surgical Journal*, December, 1874.

a peculiar leather-like appearance. The pelvis was entirely free, entire cavity four inches in depth. The idea of ovarian disease was now abandoned, and the case thought to be a cyst connected with the liver, and the patient placed on medical treatment. She recovered, and still enjoys excellent health.[1]

In this connection, Dr. Atlee reports two cases of great interest, where the diagnosis was confirmed by autopsy. Case XXXVII., Hepatic Cyst associated with Pregnancy. Case XXXIX., Traumatic Cyst of the Liver.

Case III. Mrs. W., aged thirty-six, native of England, of long-lived parentage, came under my observation in 1870. The patient was a thick-set blonde, of less than average stature, with general deportment peculiarly suggestive of hysteria. Menstruation appeared in the eighteenth year, continued with regularity, was scanty, and at times painful. She was married at twenty-two; gave birth to three living children; miscarried once. She has one daughter demented; another, younger, in whom the hysterical element is strongly developed. Her complaints are recited in the usual exaggerated manner. By superficial palpation, the abdomen was found covered with a thick layer of fat. Percussion, in every possible position, failed to elicit any signs of fluctuation.

Digital exploration showed the vaginal walls to be lax, the cervix uteri in the usual condition of a multipara, the organ more or less fixed, its cavity measuring three inches. Immediately below the cervix there protruded a smooth spherical tumor two inches in diameter, elevated from the plane of the vaginal wall at least two and a half inches. By bimanual palpation over the tumor and in the rectum, indistinct evidences of fluctuation were detected. It was evident, by the sound, that the uterus and the mass behind it

[1] In comparing some of the symptoms of my case with those of Dr. Atlee's, it might be thought that one was but a copy of the other. I can assure the reader that my notes were taken at the bedside, and the history of the case nearly completed a year before Dr. Atlee's work was consulted with a special reference to it.

were more or less intimately connected. Notwithstanding the obscurity of these symptoms, I ventured to consider the case one of cystic tumor, of the exact nature and location of which I was in doubt. I dismissed the patient with instructions to use freely and regularly the chlorate of potash internally, and report to me from time to time. I saw her once in three weeks, for the next two years. At each visit, accurate measurements of the size of the tumor in Douglas's cul-de-sac, and of the circumference of the abdomen were carefully estimated. At the end of two years, I examined the patient under anesthesia, and hence with more than usual care, and found no appreciable difference between my earliest and latest measurement; the parts being, as far as I could detect, in about the same condition. During these two years she seemed to suffer from the presence of the tumor. Nevertheless I found good nutrition, and was informed by her friends that though she kept her bed, pretending to be unable to perform her usual duties, she always ate and slept well. From the moment the patient became conscious of the presence of the tumor, she clamored for an operation, to which I finally consented by proposing an exploratory puncture per vaginam.

March 8, 1872. The patient being under ether and placed on the left side, the parts were exposed anteriorly and posteriorly by Brown's wire retractors, an exploratory trocar was passed in a downward direction into the mass in Douglas's fossa. The instrument pushed through an inch of dense tissue, finally reached a cavity of some considerable size, and gave exit to twelve ounces of thin, light brown fluid. An aspirator not being at hand, by means of a larger trocar, eight ounces more of the same fluid were removed. I then made an opening sufficiently large to admit the index finger. As far as could be reached, the lining membrane of the sac was of peculiar valvular formation. By a careful exploration bimanually and otherwise, no trace of fluctuation could be detected. The uterus was more movable, the prominence in the vagina behind the cervix no longer present.

The fluid, upon examination, showed sp. gr. 1008. Slight

acid reaction, no albumen. When allowed to stand for several days, a brown sediment was thrown down, leaving the fluid in a bright, clear condition resembling rain water. The sediment, under the microscope, was found to consist principally of broken down blood cells. I still reserved my diagnosis. I endeavored to keep the opening patent for three weeks, and when the parts were thoroughly contracted the drainage tube was removed. I saw the patient from time to time during the next two years. There seemed, in her opinion, but little difference in her sufferings, but the tumor in Douglas's fossa had certainly not refilled ; I therefore considered the case one of cyst of the broad ligament, and cured by a single evacuation. I now lost sight of the patient.

In 1874 the patient consulted Dr. Chadwick, still suffering, as she claimed, from pelvic troubles. On relating her previous history, she was sent with a view to a thorough examination, to the Carney Hospital, in the service of Dr. John Homans, where she was carefully examined by both Drs. Homans and Chadwick. Dr. Chadwick was of the opinion that he detected signs of deep-seated fluctuation, and with an aspirator confirmed the fact by removing eight ounces of brownish colored fluid. I am informed by Dr. Chadwick that the puncture on this occasion was made to the left ; also that there was no tumor presenting in Douglas's fossa. The fluid was of precisely the same appearance as that removed by myself, but less in quantity. The following is the report of the analysis, by Prof. Edward S. Wood, of Harvard University.

June 9, 1875. Fluid from cyst in left peritoneum from Dr. J. R. Chadwick. Color pale, slightly acid reaction, sp. gr. 1008 ; somewhat florescent ; sediment slight, consisting of a very few blood globules ; spores, and an amorphous substance insoluble in acetic acid. No precipitate on diluting, adding a drop of dilute acetic acid, and passing carbonic acid through it. Another portion was precipitated with alcohol, the precipate filtered and washed with alcohol, when suspended in water boiled and filtered. The ad-

dition of alcohol to this filtrate gave no precipitate, therefore there was no paralbumen present.

The patient was discharged apparently cured. In the spring of 1876 she again presented herself to Dr. Chadwick. A careful exploration showed that the sac had refilled, but there was no evidence of the tumor in the vagina. On this occasion eight ounces of fluid were removed. In color and quantity it corresponded exactly with that on former occasions. The last part of the history of the case does not change my opinion in regard to the diagnosis. It is either a case that forms an exception to the general rule, namely, that cysts of the broad ligament are cured upon a single evacuation (of which there are cases on record); or else, we may have had to do with a multilocular cyst of the broad ligament. In support of the first of these suppositions, I will adduce the following case, reported by the late Dr. J. C. Nott, of New York, quoted by Dr. Peaslee.[1]

In November, 1863, a tumor in a patient twenty-seven years old was diagnosticated as a unilocular ovarian cyst arising from the left side. She was tapped, and two gallons of limpid fluid removed, not tested; in August, 1865, twenty months later, she was again tapped, and the same quantity of limpid fluid removed. Two months after this tapping she was married, and in May, 1867, gave birth to a living child. In August, 1868, she aborted at about six weeks, previous to which she had noticed some swelling, but only for a short time. This swelling increased, and in 1869 the tumor was removed, since which she has enjoyed good health. The tumor was balloon-shaped, slightly vascular, with a long pedicle.

In support of the second proposition, namely, that it may have been multilocular, and the punctures made in separate compartments of the tumor; among a series of thirty-two cases of abdominal sections, by Dr. Péan, of Paris, four cases of multilocular cysts of the broad ligament are reported.[2]

[1] Peaslee, *Ovarian Tumors*, p. 154.

[2] *Lancet*, July, 1876.