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QUOTED FROM THE LIVERPOOL JOURNAL, JANUARY 1

II. PELVIC AB

QUOTED FROM THE PACIFIC MEDICAL JOURNAL AND WESTERN LANCET

BY FRANCIS IMLACH

PHYSICIAN TO THE LIVERPOOL HOSPITAL



EDINBURGH
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1884

I. OVARIAN ABSCESS⁶ AND PYOSALPINX.

(REPRINTED FROM THE LIVERPOOL MEDICO-CHIRURGICAL
JOURNAL, JANUARY 1886.)

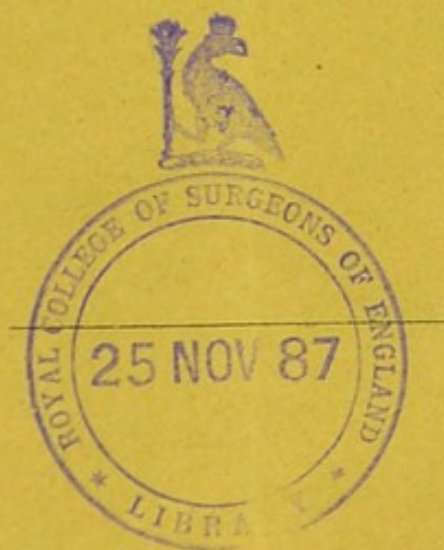
II. PELVIC ABSCESS.

(REPRINTED FROM THE PACIFIC MEDICAL AND SURGICAL
JOURNAL AND WESTERN LANCET, FEBRUARY 1886.)

BY

FRANCIS IMLACH, M.D.,

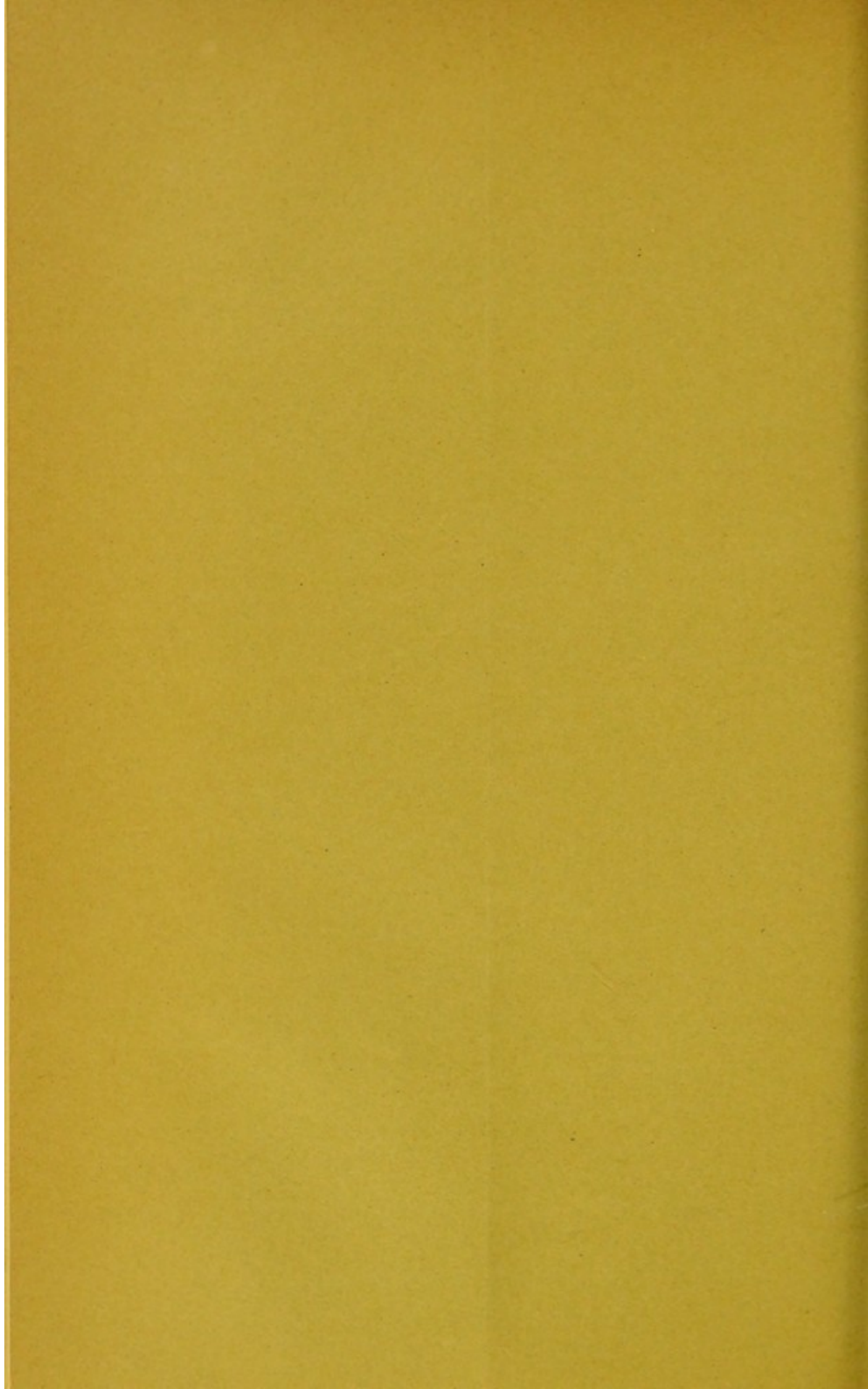
HONORARY SURGEON TO THE LIVERPOOL HOSPITAL FOR WOMEN.



EDINBURGH:

PRINTED BY NEILL AND COMPANY.

1886.



OVARIAN ABSCESS AND PYOSALPINX.

EVERY Monday at 2 o'clock I see out-patients at the Hospital for Women. If, unable to attend, I were to tell the nurse to send into hospital those women who suffered most and had been longest ill, out of ten sent in seven or eight would have some chronic inflammatory disease of the uterine appendages, and most of them would prove to be incurable without surgical treatment. It is an easy matter to overlook a small ovarian cyst. It is not until its bulk attracts the attention of friends, unless inflammation happens to set in, that the patient makes complaint; and often its bulk has become enormous before she will submit to surgical treatment. But it is not an easy matter to overlook a patient with chronic inflammatory disease of the ovaries and Fallopian tubes, though it is easy enough to make a mistake in diagnosis. I have known a woman with only ovarian abscess to be treated for typhus fever, and a case of pyosalpinx as one of cancer of the uterus. It is a common mistake to ascribe the patient's pains and complaints to acute rheumatism of the back, inflammation of the bowels, pelvic cellulitis, retroflexion of an inflamed uterus, and hysteria. But when the diseased ovaries and tubes are removed, no other pathological condition is found, except perhaps some local peritonitis or uterine enlargement, both of which are obviously secondary, and complaint of pain ceases forthwith. I show you to-night the first patient whom I treated by abdominal section for chronic inflammation of uterine appendages. It was a case of pyosalpinx. The woman, aged 29, had been five years ill, and entered the hospital with a temperature of 105° and a pulse of 120. I removed her ovaries and tubes on January 7, 1884, and she has never had a day's illness since. You see her now in

blooming health, an example both of the completeness and the permanence of the cure. On removal, the tubes were stuffed with blood and pus, and there can be no question that they would have burst long ago and caused fatal peritonitis if what is so daintily termed "the expectant method of treatment" had been followed. The diagnosis of tubal disease was made by feeling two large fluctuating masses behind the fixed uterus, and the history and temperature of the patient showed the contents of the tube to be purulent. There was little doubt as to the diagnosis, and no question what was the proper treatment. Erroneous diagnosis is due to the comparative insignificance in bulk of the inflamed mass and to the depth at which the organs are situated, but it is still more due to an absurd scepticism as to the existence of these inflammations and the harm they do. We all admit the propriety of ovariectomy, and doubtless would have supported it thirty years ago, while others were denouncing it in the choicest adjectives of our medical lexicon. But the commonplace inflammations are far more common than the grotesque outgrowths known to the laity and profession as ovarian tumours, and their right treatment is, therefore, of greater consequence. I admire those who roundly declare there are no such diseases, and that women from whom tubes containing from a drachm to an ounce or more of pus have been excised were suffering only from hysteria, or, as it is termed in the new notation, neurasthenia. But I am astonished at those who assure you they cure these diseases by medicine. They would not expect you to believe they cured cerebral, hepatic, or renal abscesses by that medicine, and they would not attempt to cure a dilated ureter by it. They are the lineal descendants of the fraternity who used to declare, in like manner, that they cured ovarian tumours by the exhibition of iodine, mercury, and herbs. No medicine did my patient any good, and since the diseased organs were removed she has required none. In a paper upon oöphoritis read before this Society eleven years ago, and printed in the local *Medical and Surgical Reports* for 1875, I summarised the opinions of others as to the worth of medication and the results of my own trials with various drugs

in the following words:—"There is no plan of treatment of this disease by which a cure can be insured or even expected within any definite period." No one then raised a single objection to this disheartening proposition, to which I still adhere. In May 1884 I read before you an account of six cases of inflammatory disease of the uterine appendages, all of which were cured by removal of the diseased parts, and though there was an animated discussion, I got no encouragement. Since that time, however, cases requiring operation have been sent to me by various medical men, and I will confess that I have on all occasions sought them out as suitable patients for admission into the Hospital for Women. I have removed the uterine appendages on one or both sides, generally both, 126 times. I do not seek out these cases now; they come to me; and I no longer doubt either the need or the efficacy of their surgical treatment. The sketch given to-night of the various inflammations of the uterine appendages is based, not upon the writing of others, but upon my hospital experience, and the summary of my cases of ovarian abscess and pyosalpinx will, I think, amply show the happy results of active interference. And I trust that those who opposed the operation formerly will be inclined to retract their opposition now.

To call the ovaries and tubes uterine appendages is an obvious mistake. It would be more in accordance with modern physiology and pathology to call the uterus an ovarian appendage. In general, disease of the body of the uterus is distinctly secondary to disease of its cervix or of the ovaries and tubes. Probably in many instances the primary inflammation has occurred in the cervix uteri—laceration during abortion or parturition, a specific virus, or frequent congestion in an unhealthy subject, being the cause. But by the time patients seek advice and treatment almost all trace of endocervicitis may have passed away. In inflammation of cervix uteri the secretions are not pent up. They flow away almost as freely as from a plane surface. There is consequently little systemic disturbance, and though a chronic gleet is not uncommon, and is sufficiently disagreeable, it is not dangerous.

It can easily be cured without amputation of the cervix, and may spontaneously cease. But inflammation that has extended along the uterine mucous membrane to the tubes and ovaries is a different matter altogether. The pathological secretions are pent up and decompose; there is tension and chronic exudation, or wholesale injection into the peritoneum. The rapid pulse, the high temperature, the local or general peritonitis, which are unknown in endocervicitis, always supervene, sooner or later, in ovaritis and salpingitis. There may be a long continued flow of blood from a tender or torn cervix, but there is none of the tiring backache and pallor which are constantly associated with the menorrhagia occurring in disease of the ovaries and tubes.

The Fallopian tubes are two-way conduits, and may be infected either from the ovary or the uterus. Their mucous membrane is thrown into longitudinal folds by which the flow of the ovarian secretion into the uterus is assisted. It has no secreting glands, and its epithelium when healthy becomes ciliated at puberty. Its muscular coat is capable of great development when there is an obstruction in the channel, and its peritoneal lining is sufficiently distensible to contain a three months' foetus and its accessories. Its uterine extremity is so narrow as to admit only a bristle, and impermeable stricture is a common event. During abdominal section for hydro-salpinx I have tried to squeeze the tubal contents through this end, and after cutting open the tube have endeavoured to push a fine probe into the uterus without success. The fimbriated extremity or pelvis of the ovary is widely patent, but generally becomes closed when diseased. The fimbriæ may simply be glued together, or they may be also much hypertrophied and form a thick clubbed end to the tube. It may be closed by inflammatory adhesion to the ovary, or be fixed like a sucker to the peritoneum in Douglas's space, to the vermiform appendix, the cæcum, or rectum. When both extremities are closed the tubes are blown out like balloons, and very easily burst. Sometimes they are perched on the fundus of the uterus, occasionally they are adherent to the bladder, but in

genera they are packed away in Douglas's space, where they become strongly adherent.

Menstrual discharge is not found in healthy tubes, for ovarian hæmorrhage is always pathological, and probably soon sets up tubal disease. In hæmatosalpinx there is always distension, and the coats of the tube may be so thin and translucent that the blood is plainly seen through them. Sometimes while the fimbriated extremity is glued up the uterine outlet is free, and the tubes are then like half-filled sacs, and it is quite possible that such a simple case of occluded tubes, under careful management, may become practically well without surgical treatment; but there are no means of estimating how many go on to the state of pelvic hæmatocele, in which the tubes are still more distended, their walls immensely thickened, and the abdominal cavity perhaps half-filled with thick dark clotted blood, which never becomes wholly absorbed. When this stage is reached the pain and finally the septic fever make women anxious for any chance of relief, and the removal of the diseased organs, followed by sponging out of the peritoneum, results in a permanent cure. I know it is alleged that pelvic hæmatocele is curable by methods intended to promote absorption, but as I have removed large quantities of dense clot during abdominal section from a patient who had been constantly under medical treatment by various gynæcologists for a period of twelve years, such absorption must at any rate be a slow process.

In hydrosalpinx, which occurs chiefly between the ages of 30 and 45, the tubes are closed at both ends, and are distended with from one to five ounces of thin limpid sero-albuminous fluid which rarely coagulates on standing. The tubal wall is generally thin and quite transparent, the mucous membrane and muscular coat being almost entirely obliterated; but the peritoneal covering is so strong that, unless there are tough adhesions, the tubes can be drawn out of the pelvis without rupture. When, however, there is moderate hypertrophy of the muscular coat of the tube, and the wall is tough and opaque, it is safer to aspirate before removal, as it is impossible to forecast the nature of the fluid contents. The pain of tension is

surprisingly great, and I have removed the appendages for hydrosalpinx twelve times without a death.

In acute pyosalpinx the tubes are brilliantly injected with blood, and fresh creamy pus issues from the fimbriated end. It is a condition which I have several times seen in the *post-mortem* theatre, but have not yet met during operation. Of chronic pyosalpinx there are many varieties. When the tubes are not occluded, they feel like thick cords in the hand, and contain only from a few drops to a drachm of ash-grey pus or muco-pus. Sometimes they feel as if two or three beans had been thrust down their channel, and when these thickened and dilated chambers are cut open, thick clotted pus, with perhaps dark brown blood, is found. It is to these two varieties that the term chronic salpingitis is applied. Again, the infundibulum may be distended with pus, the uterine half being only somewhat thickened; and finally, the whole tube may be filled with yellow liquid pus, with ash-grey muco-pus, or with thick putrid pus and fibrinous shreds. Though there can be no doubt that gonorrhœa is a common cause of pyosalpinx, I am still disinclined, from the evidence before me, to acknowledge it as the sole cause. It is generally found between the ages of 18 and 30, but occurs also about the menopause in some cases of chronic metritis and carcinoma.

There is another form of inflammatory disease of the tubes differing from ordinary hydrosalpinx and pyosalpinx, and more explanatory of these diseases than either. The tube is not sacculated, but the infundibulum is distended with fluid which coagulates on standing, and its fimbriated extremity is neither clubbed as in pyosalpinx, nor thin and transparent as in hydrosalpinx. The pavilion is expanded, thickened, and cup-shaped, and contains a large firm corpus luteum, or else a soft formed mass of coagulated blood which has evidently escaped from a blood cyst of the ovary. I first recognised this state of affairs during an abdominal section performed at the Hospital for Women on September 2, 1884, and have seen several more or less well-marked cases since. The patient was a young married woman, aet. 27, and had suffered long from pain in the

right hypogastrium and from menorrhagia. The right tube was not greatly distended, but the pavilion was excavated and its fimbriæ clasped what was at first supposed to be the right ovary. But presently the right ovary was discovered deeply prolapsed in Douglas's space, fully an inch and a half away from the tube. After removal of the organs, microscopic sections of the clasped body, which were kindly made for me by Mr Larkin at the School of Medicine, when compared with sections of a true corpus luteum, showed an identical structure, and a collapsed cyst in the ovary, half filled with blood and pus, had evidently contained the corpus luteum, which was an inch in length, before its escape. This patient recovered, and has had no pelvic trouble since. She has one healthy ovary and tube, and her menstrual functions are normal.

Even when both tubes are immensely distended with pus or other fluid, there may be little sign of disease in the ovaries. In these cases, however, they certainly are not quite healthy. Sometimes they are little shrivelled-up organs packed away in Douglas's space, scarcely recognisable, and then the phrase "crushed ovaries," fairly describes their pathology. But oöphoritis may occur, though only in a slight form, without concurrent disease of the tubes, and its varieties are probably as numerous as the diseases of the kidney. I suppose there is an acute oöphoritis, but must confess I am unable to recognise it by its symptoms or to describe it from specimens removed during life or seen in the *post-mortem* theatre. As the inflammatory diseases of the tubes are those of an obstructed canal, so the inflammation of the ovaries consists mainly in the pathology of its cysts. Hypertrophy of the stroma of the ovary is of common occurrence where the uterus is enlarged by fibro-myoma, and there is a cirrhotic condition which is occasionally the source of constant pain. But the varieties of oöphoritis are chiefly marked by pathological changes in the Graafian follicles and corpora lutea. In the foetus these little physiological cysts or closed follicles exist in thousands, but in the course of a few years the majority of them have disappeared. It has been alleged that they develop as in the adult, form corpora lutea on

a small scale, and finally shrink, but this has not been established by observation. There is no need to describe the physiological changes that occur in the active organ after puberty; only it must be remembered that what was formerly termed the corpus luteum of pregnancy is often found in the ovaries of women who have never borne children, or who are not and have not recently been pregnant. It may be that these ovaries are not healthy, for sometimes from two to five "true corpora lutea" are discovered in a single ovary.

When these physiological cysts of the ovary contain from a drachm to an ounce of dark fluid blood, and the membrana granulosa is soft and diffuent, or when they contain a more or less disintegrated corpus luteum floating loosely in blood, the ovary may be termed hæmatocystic, a condition which is common in hæmatocele, but occurs also with pyosälpinx.

When the Graafian follicles become large watery or dropsical cysts, the ovary being made up of a cluster of them, or one thin walled cyst the size of an orange almost taking the place of it, the organ may be fairly described as hydrocystic, a condition which is entirely distinct from cystoma, and which is chiefly found in starved women, the starvation being sometimes due to prolonged lactation and dyspepsia and sometimes to want of means. These are the cases that are benefited by rest and food, and it is only when there are painful complications that surgical treatment is required.

And when, finally, the ovaries contain cysts full of sweet or putrid pus, or of a mixture of blood and pus, they are pyocystic. Sometimes the cysts are shrivelled husks, each containing only a few drops of pus, but sometimes one will hold an ounce or two, and in these cases the pus is generally foetid. In ovarian abscess the tubes may be only congested, but more commonly they are thickened and purulent.

It must not be supposed that hæmatocystic ovaries always go with hæmatosalpinx, hydrocystic ovaries with hydrosalpinx, and pyocystic ovaries or ovarian abscess with pyosalpinx; frequently they do, but the exceptions are also numerous.

And it is evident, unless my interpretation of their pathology has been wholly wrong, that there is a striking likeness between some of these inflammatory diseases and the diseases of the kidneys and ureters which are induced by the presence of calculus, such as nephritic abscess, pyelitis, hydronephrosis, &c. It would be difficult to give a sketch of renal diseases in twenty minutes. I do not pretend to have fully developed the pathology of oöphoritis, and I have left untouched the important subject of tuberculosis. Whether the uterus infects the tube in the first instance, and the tube infects the ovary, or whether inflammatory disease may not also originate in the ovary, and by its pathological discharges set up secondary and even more obvious disease in the tubes, is a question in etiology which I should gladly hear discussed.

But there is a further extension of these diseases which adds greatly to their gravity; sooner or later general, or else what is termed localised, peritonitis is set up by overflow of the ovarian and tubal contents into the abdominal cavity. Localised peritonitis is not peritonitis at all: it is only a threat ending in a failure. Last year I showed here a specimen from a patient in whom perforation at the sigmoid flexure had occurred, and fæces were discharged into a pelvic cesspool whose walls were made by mesentery and vesical peritoneum. As there was an outflow from this cesspool into the bladder, through which almost all the fæces passed during six weeks, general peritonitis did not become developed; she died without a trace of it. In the so-called pelvi-peritonitis which accompanies inflammations of the appendages, the fluid in the peritoneum is almost precisely similar to the fluid in the tubes.

In the case of a hydrocystic ovary or hydrosalpinx the peritoneal fluid is serous: generally it lies free in the cavity, but when it becomes encysted it is termed local serous perimetritis. When the tubes or ovaries contain blood the fluid in the peritoneum is blood also, whether it is encysted (as it only rarely is) or not; when they contain or have contained pus the contents of the peritoneum are purulent; and adhesion of peritoneum and matting of intestine for the formation of a

pelvic cesspool is the only part played by the peritoneum, unless indeed general suppurative peritonitis, a disease which is fatal in a few hours, is set up. In the case of a lady who had long been a private patient, I diagnosed left pyosalpinx in the spring of 1884, and advised operation. She did not refuse, but allowed the matter to drift until she became pregnant in the beginning of December. During the whole of her pregnancy the pain was very great, and she urged me to operate, but, rightly or wrongly, I declined, and she was delivered of a living child in the beginning of September 1885. Three weeks later, while I was out of town, in spite of warning from the nurse, she got up to go out a drive, and while pulling on her boots "felt something burst inside her" with exquisite pain, and was carried to bed. She was most carefully treated by a medical friend who kindly saw her three or four times a day, but when I returned two days later her temperature was 104° , her pulse 160 and almost imperceptible, and she died in the course of the night. Again, last Sunday (December 13th) I was called to a patient who had been advised months ago to have her uterine appendages removed for pyosalpinx, but had declined. Her abdomen was distended and dull to percussion, her pulse was 160, her temperature $105^{\circ}5$, her face and body covered with a cold sweat, and she seemed within a few hours of death. When, as a desperate resource, I opened the abdomen, putrid pus and fæces poured out, and when I inserted my two fingers I found the right Fallopian tube a large collapsed sac and the rectum perforated. The first case was evidently one of general suppurative peritonitis immediately following rupture of a pyosalpinx, and the second probably one of suppurative peritonitis following a local encystment of pus which had been discharged into the peritoneum and was seeking further outlet. Where there has been long-continued septic fever shown by the temperature and pulse, and no fluid is found in the peritoneal cavity, as occasionally happens, it may be supposed that septic exudation has occurred only drop by drop, and that absorption has been as fast.

Now I am quite ready to admit that after the ovaries and

tubes have poured their contents into the abdomen they may heal up, and all that is required is to drain the peritoneum. I have done this and nothing else several times, and the results have been satisfactory; but how any one can seriously suggest this method as sufficient in all cases I am at a loss to understand. When I find distinct disease of the ovaries and tubes I always remove them, and it will take good evidence to make me change. In hydrosalpinx with serous effusion there is no fear of further development of disease, and if women care to endure the pain there is no reason why they should not. But when it is a case of ovarian abscess or pyosalpinx there is not only pain and misery but constant danger to life, and operative treatment should be urged upon the patient; for medical treatment, whether homœopathic or otherwise, is useless. I have treated 41 cases of ovarian abscess and pyosalpinx with a mortality of three, or seven per cent. It is not a heavy mortality, considering the serious nature of the cases, though I wish it had been less. As I have never refused a case on account of its difficulties, and have never registered one as an incomplete operation, I comfort myself that it has not been greater. What experience teaches is the necessity of aspiration of pus before removal of the organs, and the careful use of sponges, for if foetid pus escapes and runs among the intestines no amount of washing will insure recovery. In one of my fatal cases, a recent one, there was well-marked exophthalmic goitre with cardiac palpitation and large quantities of sugar in the urine, though sugar was not always present. In another case, which recovered, glycosuria was constant, but disappeared permanently after operation. Two patients in whom I removed the ovary and tube only on one side are now pregnant. Full restoration to health is not so rapid where there has been ovarian abscess or pyosalpinx; membranous dysmenorrhœa, which is occasionally associated with these conditions, may recur once or twice after operation; but in from three to six months the women are generally in perfect health, and when they are young painless menstruation often reappears.

ON PELVIC ABSCESS.

PELVIC abscess, almost more than any other, should be opened, emptied, and drained. That is the doctrine to which both men and books are gradually approaching. Elsewhere an abscess soon opens itself, but in the pelvis it burrows round and distorts the viscera, bursts into cellular spaces and floods them with blood and pus, and, in search of an outlet, may fatally perforate the peritoneum. And if it opens into the bladder, vagina, or rectum, a cure is seldom attained. From pockets, sinuses, and fistulæ there flows a chronic purulent discharge which defies the ingenuity of the surgeon. The production of an ounce of pus is often more exhausting than the loss of a pint of blood, and when putrefaction occurs in deep recesses thorough disinfection is practically impossible. Even normal excretions diverted into wrong channels induce mucous catarrh. Urine and fæces, flowing over the vagina through a fistula, cause vaginitis, and the vaginal secretions, leaking into the bladder or rectum, cause cystitis and proctitis. Pus is foreign to all these channels, and the consequent catarrh, by its infective character, prevents closure of the abscess cavity. Irrigation with chlorinated soda, or other disinfecting solution, may cure this catarrh, and the abscess cavity may shrink; but spontaneous discharge of a pelvic abscess by bladder, vagina, or rectum is an untoward event, and to prevent it is good practice.

Neither as to the pathology nor the treatment of pelvic abscess is there, as yet, complete agreement among gynæcologists. There is now, however, a wholesome tendency to neglect past general principles for present particulars, and the philosophical composure with which the "natural history of disease" used to be studied is maintained in few hospitals. The haste to interfere

to shorten the process, rather than to inquire into its essential nature, is extending; while the laggard and timorous treatment, which consists in waiting patiently for the end, is already in disrepute.

To cure a pelvic abscess, however, it is not always necessary to drain. Though gynæcologists are indebted, perhaps more than other surgeons, to Chassaignac for his recognition of the importance of drainage, it must not be forgotten that it is possible to cure even a large and foetid abscess by aspiration. Here are two illustrative cases, both from the records of the Hospital for Women, in which pelvic abscess was exposed by laparotomy and aspirated.

Case 1. A woman aged 31, three children, the youngest two years old, menstruation regular but painful, a chill thirteen months before admission, a bedridden invalid for four months, uterus pushed to the left by a mass which rose into the right hypogastrium. January 27, 1885, abdominal section in the median line, ovary and tube lost in the immensely distended left broad ligament, seven and a half ounces of very foetid pus aspirated, a glass drainage tube inserted, *not* into the abscess cavity, but, for precaution, into the peritoneal cavity, tube removed next day (no discharge); temperature before operation 103° , pulse 125, highest temperature after operation $99^{\circ}8$ during a few hours on the second day, but generally under 99° ; pulse rose to 130° , but subsided with the temperature. February 20, patient left hospital feeling and looking well; the uterus was then somewhat fixed, but it is now mobile, and she remains in good health.

Case 2. A woman sent in by Dr O'Hagan, Garston, in February, with a history of inflammation of the bowels during the previous summer, and with a large inflammatory tumour in the right side of the abdomen since Christmas. As she seemed in the last stage of prostration, a precisely similar operation was performed on February 19, 1884, and thirty ounces of pus, so foetid that the theatre became intolerable, were aspirated. Two days later, there being no discharge, the drainage tube was removed from the peritoneal cavity, and the patient left hospital on March 10, 1884, with her health perfectly restored.

This ready method would certainly have failed if I had not completely emptied the cavities, or if there had been dead bone, diseased gland, or sloughing tissue to maintain suppuration. It may be suggested that after aspiration I should have made a free opening into the sac and drained. I have tried this once with success, but would not care to repeat it. It has been suggested that the proper plan is to open the sac, stitch its wall to the peritoneum, and insert a drainage tube. But in both instances the cure was not only immediate, but also permanent; and, besides, after aspiration the sac shrunk and sank so far out of reach that to stitch it to the abdominal wall would have been impossible.

When drainage of the abscess is intended the peritoneal cavity ought not to be opened. It is quite safe, in suitable cases, to open up the inguinal canal and pass a probe carefully along the swollen round ligament into the abscess, and by inserting a glass or rubber tube it is possible to drain a large cavity without fear of peritonitis. Sometimes an abscess seems to point in the inguinal region. If left alone it does not burst, but extends towards the anterior iliac spine, and not even constant poulticing will make it open. But if the operation above described is performed, though little pus may exude at first, it soon flows plentifully, and the swelling slowly subsides. Often there is no abscess, but only diffusely suppurating tissues.

Case 3. A married woman, aged 26, with a child three months old, tried to stab herself in the left groin with a knife. In the inguinal region there was a prominent swelling, which extended into the iliac fossa, and could be felt to the left of the uterus. A much larger inflammatory swelling may be painless, but her agony seemed to be unendurable. On January 20, 1884, under ether, the pillars of the left ring were exposed, and a probe was passed two or three inches along the round ligament, but only a few drops of pus exuded. A wire drainage tube was inserted, and the wound fomented with flannels wrung out of hot carbolic lotion. In a few hours the dressing became soaked with odourless pus, and the patient was free from pain. But though the tissues remained aseptic the discharge continued for several weeks, and complete recovery was comparatively slow.

Cases 4 and 5 were young women, aged 18 and 24. In both of them pelvic suppuration, subsequent to child-birth, was treated in the early months of 1884, by opening up the inguinal canal and draining, and within a month, though in one the abscess was slightly foetid, there was complete recovery. In a fourth case a counter opening had to be made an inch above the outer half of Poupart's ligament four days after the first incision, but after that the swelling quickly subsided. In a fifth this incision was made after unsuccessful aspiration *per vaginam*, and the result was satisfactory. A few other somewhat similar cases might be added, but these suffice for illustration of the method. Though I do not attempt a statistical record, I may add that in all cases of pelvic abscess in which I have employed surgical measures at an early period, recovery has taken place.

When a pelvic abscess occupies a large area of subperitoneal tissue and reaches nearly to the ribs, or when it is subaponeurotic, and the symptoms are those of psoitis, an incision above the anterior superior spine of the ilium materially shortens the suppurative process. According to circumstances, the incision may either be extended inwards, above Poupart's ligament, or outwards above the iliac crest. This oblique incision, variously modified, is used for many purposes. By it the common iliac artery is tied, and perityphlitic and psoas abscesses are drained. By it a child can be extracted from the pregnant uterus without injury to the peritoneum or uterus, and, when extended upwards and outwards, an enlarged kidney could be removed. With only a small incision a large area can be thoroughly drained. When the abscess is subaponeurotic the iliac fascia can be freely laid open with the bistoury, and a glass drainage tube, suitably lodged, will soon insure the subsidence of acute diffuse suppuration.

Case 6. A married woman, aged 24, with four children, her illness dating from the birth of the youngest seven weeks previously; a history of several distinct rigors, an inflammatory tumour on the right side of the uterus, extending high above the right iliac crest, with a brawny swelling occupying the right hypogastrium. February 15, 1885, an incision one inch and a half long was made parallel with the outer half of Poupart's

ligament and two inches above it. By the cautious use of a glass drainage tube as a probe, a few drachms of foetid pus, mixed with shreds of dark clotted blood, were drained away, but no distinct abscess cavity was opened. For three weeks there was a constant flow of pus, which at length became sweet, and then ceased. The tube was removed ten days after the operation. March 17, patient left hospital, walking freely and without pain; there was no longer any mass, but the uterus was still fixed.

Case 7. A pale, unhealthy young woman, aged 28, never well since confinement ten months previously; abscess, with all the characters and symptoms of left psoas abscess, but intra-pelvic origin doubtful; treated, April 9, 1884, by free incision over Poupert's ligament, the iliac fascia being opened with a bistoury, and a drainage tube inserted; nearly well in two months; condition five months later still fairly satisfactory—abscess quite healed, but the patient pale and thin.

Case 8. A patient with a brawny swelling in her right hypogastrium, which seemed to point an inch within the anterior superior iliac spine. Her second child was five months old, and she had never risen since her confinement, which had lasted twenty hours. It was opened in May 1885, and drained of much pus and clotted blood. A fortnight later the swelling increased, but a poultice caused an increased discharge, and in six weeks she was walking about.

A favourite method of treatment, on account of its simplicity, is aspiration *per vaginam*. A pint, or more, of pus may be drawn off in this way. It is a common practice, and, though I have several times successfully adopted this treatment, examples are needless. As it is said that pelvic abscess more frequently bursts into the rectum, I have once or twice punctured through that viscus, but only when the abscess was very prominent.

Case 9. November 28, 1884, pelvic abscess aspirated *per rectum*, in a woman aged 40, and about half a pint of pus withdrawn. December 9, patient worse, and laparotomy was performed; tubes filled but not distended with muco-pus, pus encysted in Douglas's space. As it was found impossible to remove the tubes, their contents were squeezed out on to

sponges, the peritoneum was thoroughly sponged, iodoform was sprinkled in Douglas's space, and a drainage tube inserted. The patient's recovery was slow; it was incomplete when she left the hospital on January 7, but she has continued to improve since she returned to her home.

The abscess was evidently intra-peritoneal, and not within the cellular tissue. When a large mass bulges down behind the uterus, and cannot be felt in either hypogastrium, it may be certainly affirmed that it is not a case of abscess within the cellular tissue. It may be pus within the peritoneum, but far more frequently it is the distended Fallopian tubes that are felt. And while in these cases aspiration can only do harm, laparotomy with removal of the diseased structures insures an easy cure. Minute directions have been given for the selection of the right time to aspirate. If the abscess is not "ripe," no pus will flow, or, though it does, the abscess refills. If, on the other hand, burrowing has commenced, aspiration will not prevent its extension. I will not pretend to offer an opinion on this question. Bimanual examination will not always tell whether pus is present, nor where it is chiefly located; the temperature is no sure guide, for, except during the initial rigor, where it is probably always elevated, it may be high, normal, or even subnormal; and complaint of pain is uncertain, for while a drachm of pus will keep one woman in bed almost unrelieved of her agony by the hottest fomentations and large doses of opium, another will do a hard day's work, and at night have a sudden and copious gush of pus from the vagina. My plan, when I mean to aspirate, is to try it at once. And no matter how favourable the conditions may appear, one must always be ready for eventualities. Instead of kindly subsidence of inflammation, swelling and pain may increase, and though a second tapping may be successful, it is safer to make a free opening. Although I have only a limited confidence in the use of the aspirator, there can be little doubt that in some cases where harm has resulted from it, an absurd and unfortunate attempt has been made to aspirate ovarian or tubal abscess—a procedure of infinite risk, and never ultimately successful.

A free vaginal incision over the most prominent part of the tumour, with (or without) insertion of the finger and breaking up of adhesions, has been recommended. I must confess I prefer almost any other method. The tumours which, by their vaginal prominence without abdominal swelling, suggest this treatment, are either pelvic hæmatoceles or other tubal disease, and to make a free opening into them through the vagina is to court fatal peritonitis.

There is yet another treatment, if such it may be termed, to be considered. Pelvic abscess is so various in its conditions and so uncertain in its rate of progress, it is scarcely to be wondered that many writers have held out the hope that the inflamed mass or phlegmon, if left alone, might disappear without suppuration. It was Nonat who said that in the space of a few hours a swelling or phlegmon of the cellular tissue about the uterus might attain to the size of a hen's egg. In describing the various sites in which phlegmon might arise, he appears to have depended less upon his large hospital experience than upon the logical exercise of his anatomical knowledge. Phlegmon might arise on either side of the uterus, in front or behind it. When it was close to the right or left of the uterus, he termed it lateral phlegmon; when further out, it was phlegmon of the broad ligament; when it was between the rectum and uterus, it was retro-uterine phlegmon; and ante-uterine when it was between the bladder and uterus. It might even form a girdle around the uterus, and extend outwards to the iliac fossa, upwards to the lumbar vertebræ, or forwards to the navel, and then it might all disappear. Controversy is the life of science. Bernutz had made a great advance in pelvic pathology by discovering how frequently, when pelvic abscess had been diagnosed during life, the disease was found after death, not in the cellular tissue at all, but in the tubes and ovaries. Of late years, not only have his observations been largely confirmed by the living autopsy, but at the same time a thoroughly satisfactory treatment has been effected. In the early enthusiasm for the new pathology, the observations of Dupuytren, showing the frequent relation of abscess in the right iliac fossa with disease of the cæcum and

vermiform appendix, were forgotten, though they are recalled to our memory by Dr Fenwick's cases recently recorded in the *Lancet*, and the labours of Marchal, Velpeau, Grisolle, and Dance were ignored. In his invaluable memoir upon inflammatory diseases of the ovaries and Fallopian tubes, to which he gave the unfortunate title "pelvi-peritonitis," Bernutz casts ridicule upon Nonat. He even casts ridicule upon pelvic cellulitis. But the old pathology is as true as the new. It is not necessary to go abroad to discover that. In the north of England practitioners have been familiar with this disease since Mr Wainwright, Surgeon to the Liverpool Northern Hospital, communicated a series of seven cases of abscess forming within the pelvis after labour to the *Transactions of the Provincial Association* in 1841, and Mr Jennette, Surgeon to the Birkenhead Borough Hospital, sent his article in 1850 to the *London Gazette*. Doherty and Churchill's papers in the *Dublin Journal* of 1843; Lever and Bennet's articles in *Guy's Hospital Reports* for 1844 and the *Lancet* of 1848; Simpson's articles on Pelvic Cellulitis in 1859, and, ten years later, Matthews Duncan's analytical work on Perimetritis and Parametritis, are stocked with clinical cases of pelvic abscess and cellulitis, in which disease of the ovaries, tubes, and uterus obviously form no part, or at least not the whole.

It has been fully established, Bernutz notwithstanding, that phlegmon may rapidly arise in the fibro-cellular tissue in which the cervix uteri is imbedded, and that, sooner or later, suppuration generally ensues. The pus, as it forms, burrows in the subperitoneal fat and loose connective tissue, distends the broad ligament, follows the round ligament to the inguinal canal, occupies the iliac fossa generally between the peritoneum and aponeurosis, but occasionally also between the aponeurosis and the psoas and iliacus muscles, or follows the ureter to the kidney, sometimes causing suppression of urine. In each cellular space the presence of pus probably sets up suppuration afresh, and pints may collect before there is any discharge. If left to its natural history, the abscess will burst above or below Poupart's ligament into some of the pelvic viscera, into the ilio-

rectal fossa, along the pyriform muscle, and through the sacro-sciatic foramen into the gluteal region, or above the pubes, or into the peritoneum. I have been the unwilling witness of almost all of these methods of termination of enclosed pelvic abscess, and for each of them there is better authority than mine. But it is not so well established that phlegmon may abort and become a mere chronic pelvic induration without suppuration, and the etiology of the rise and course of the disease, after half a century of discussion, is still an open question. Vaginitis, metritis, salpingitis, ovaritis, and pelvic cellulitis; that is, the somewhat round-about origin of the disease according to one school. Inflammation of the lacerated edges of the cervix extending into the cellular tissue; that is, the more direct route adopted by another. Against the first theory there is the objection that it is not in accord with facts. Pelvic abscess, suppuration in the cellular tissue, is not associated with the various forms of salpingitis and ovaritis recognised by surgical gynaecologists. Twice only, besides the case above narrated, in the course of laparotomy, have I seen pyosalpinx with pelvic abscess, and amongst the risks of the operation for removal of the uterine appendages for inflammatory disease, the likelihood of co-existent inflammation of the cellular tissue does not enter. Certainly the tubes, buried in the distended broad ligament, look congested, but since I have had a practical acquaintance with pelvic pathology this congestion has never appeared to me to have any causal import, and I reject Aran's dictum that "the causes of periuterine inflammation are those of inflammation of the tube and ovary which is almost constantly its starting point." In favour of the theory of extension of inflammation from a lacerated cervix is the fact that both pelvic abscess and laceration of the cervix are common to the primiparous state. But this theory would serve better as an explanation of the occurrence of angio-leucitis, of adenitis, and of phlebitis; it is adequate to the pathology of white leg, but it scarcely accounts for the localised abscess, and not at all for the frequency with which old clotted blood is found mixed with the blood. The terms thrombus, cellular hæmatocele, suppurating hæmatocele, some-

times applied to post-partum pelvic abscess, all show the frequency of this mixture. Sometimes the abscess is foetid, which would be in accordance with this theory, but sometimes it is not, and that militates against it. Again, if this origin were the common one, spontaneous discharge of the abscess would take place almost invariably *per vaginam*; but, in fact, this seldom occurs. We seem driven, therefore, to the belief that there must have been bruising and laceration of the tissues proper to the abscess. As vaginocoele is only explicable by the hypothesis that the support of the muscles and fascia of the pelvic diaphragm is lost, so is their rupture during confinement, with consequent extravasation of blood, a reasonable explanation of post-partum abscess.

I have not had many opportunities of studying this disease in the dead. Patients with chronic pelvic abscess of the late and incurable order gradually drift off into almshouses, and if they ever appear again in the light of science it is rather in illustration of waxy liver and of phthisical lung than of pelvic abscess. Three times I have examined old pelvic abscess after death without results of much etiological value: general putridity, sloughing tissues, and bare bone are the sum of the investigation. Once I found, in 1876, abscess in the lumbo-sacral joint, separation of the right sacro-iliac synchondrosis, and sloughing of the levator ani and pelvic fascia; once I found, in 1879, with similar sloughing on the left side and separation of the left synchondrosis, excavation in the lumbar region also—the abscess having laid bare the left transverse processes of the two lower lumbar vertebræ, though the discs were not destroyed; and lastly, while present in 1881 at the autopsy of a woman, aged 37, who appeared to have succumbed at an earlier period of the disease, I saw that the pelvic fascia and muscles on both sides were dense, cartilaginous, and undistinguishable, and that the cavity of the abscess (which had opened in the left groin) extended widely in the subperitoneal tissues of the left iliac fossa. Until, however, opportunity is afforded for examination of more recent pelvic abscess, the theory of its origin, when the disease is post-partum, in lacerated muscles and fascia, must remain an hypothesis. It

would be absurd to deny that, in a healthy constitution, bruised tissues may heal without abscess and swelling, and disappear or become indurated; but in practice of the expectant treatment, which dispenses both with the knife and the aspirator, the patient's health is apt to become permanently injured, as the phlegmon slowly but surely manifests itself as an indubitable pelvic abscess. The expectant treatment lives not on its own successes, but on the occasional failure of surgery in tuberculous subjects. By early opening of the abscess caseation of the lumbar lymphatic glands may probably be prevented. When opening is long delayed nothing will save the life of a tuberculous patient.



