On excision of the entire uterus for cancer, with notes of a successful operation : being an abstract of two lectures delivered at the Cancer Hospital, on March 5th and 12th, 1886 / by Chas. E. Jennings.

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PREFACE.

At the suggestion of a few friends, the Author, with the kind permission of the Editor of the *Lancet*, ventures to republish in this form the abstract of two Lectures, delivered at the Cancer Hospital in 1886.

He would embrace the opportunity for saying that the result of further experience adds to his belief that Cancer is essentially a disease of local character, and that the free and early removal of cancerous growths is ordinarily followed by immunity from recurrence; that it is only in cases such as the one which formed the basis of these Lectures, where the anatomical relationship of the diseased part precludes the possibility of removal of sufficient of the surrounding healthy tissue to ensure the absolute extirpation of the morbid deposit, that a return of the disease, either locally or at some point in *anatomical continuity* with the seat of the original mischief, should obtain.

The Author is influenced in expressing this opinion chiefly by the circumstance that out of all the operations he has performed for cancer of the *breast*—where the anatomical condition permits of very free extirpation of the diseased tissues being practised—in no single instance has any patient returned to him with recurrence of

the growth; and out of a large series of operations for Cancer situated in diverse parts of the body, immunity from return has been the rule, and recurrence the exception.

Neither is the Author solitary in his ideas as to the nature of Cancer, and by the courtesy of Sir William Gull he is enabled to publish the following terse exposition of Sir William's views on the subject:—

"As the ovum differentiates into organs and the parts of organs there is carried the hereditary force for good and for evil.

"Hence the local characteristics of the individual, expressive of the stock from which it came (heredity). The constitutional tendency is, therefore, *expressed locally*, as the voice of a man is that of his family, but this depends upon the structure of the larynx.

"Cancer, as this would lead us to believe, though in a sense inherited, is so only from the local disposition of certain parts.

"Practically, therefore, it begins locally, and may and must be thought of in its first occurrence in the system as a *local disease*."

Moreover, a hope really at last exists that Cancer—in some forms at least—may be cured by medicaments. A few cases, carefully recorded, which support this hope, have lately been published in the medical journals; and the Author has at this moment a case under observation at the Cancer Hospital, where a growth of undoubted Cancerous character is disappearing by the use of medicaments only. On this question more must be said at a later period.

15, Upper Brook-street, Grosvenor-square, W.
December, 1886.

ON EXCISION OF THE ENTIRE UTERUS FOR CANCER.[1]

LECTURE I.

THE object of two lectures which I delivered at the Cancer Hospital this session was to advocate vaginal extirpation of the uterus, for early cancer of the cervix, as the operation to be usually performed, to the exclusion of other methods of treatment, as soon as the diagnosis is established. History teaches us that in the past the mortality which attended excision of the entire uterus was so great that the operation could only be considered a desperate remedy to be adopted for desperate conditions; to-day it is struggling for a settled place in surgery, and for the near future why should not extirpation of the uterus be followed by a measure of success equal to that which now accompanies other severe but recognised surgical procedures on abdominal organs? From statistics contained in a valuable paper on extirpation of the uterus, presented to the Obstetrical Society by Dr. Wm. Duncan in January, 1885, it appears that of 137 cases of

[1] Reprinted from the *Lancet*, 1886, vol. i., pp. 682, 825.

abdominal extirpation 38 recovered and 99 died, being a mortality of 72 per cent.; but of 276 cases of vaginal extirpation 197 recovered and 79 died, being a death-rate of 28·6 per cent. The former group of operations were divided among seventy-one and the latter among sixty-nine surgeons, and therefore it seems right to conclude that, except under some special circumstances, the vaginal should be preferred to the abdominal method of uterine excision. This conclusion is strengthened by the fact that many of the operations in the two categories were performed by the same operators. For example: Martin performed 6 hysterectomies by the abdominal method, and all the patients died; he operated 60 times by the vaginal method, with 47 recoveries and 13 deaths. Of 8 abdominal extirpations of the uterus by Billroth, 3 recovered and 5 died; of 12 patients operated upon by the same surgeon by the vaginal method, 8 recovered and 4 died. Of 8 abdominal operations by Schroeder there were 3 recoveries and 5 deaths; whilst of 27 vaginal extirpations there were 19 recoveries and 8 deaths. Guided by these statistics, I elected to excise the uterus per vaginam in the following case, where the removal of the entire organ was the only means by which life could possibly be prolonged beyond a very limited period.

On Sept. 1st, 1885, Mrs. R——, aged thirty-five, who had been twice married, attended at the Cancer Hospital, complaining of an offensive, sanguineous vaginal discharge, associated with

pelvic pain and other symptoms, of some months' duration—viz., since the birth of her last child. One of her sisters was reputed to have died some years ago of "cancer of the bladder." Physical examination disclosed an infiltration of the cervix uteri with ulceration around the os externum. The disease being apparently well localised, it was decided to destroy the neoplasm and surrounding tissue with caustic potash. This was accordingly done on Sept. 5th; several sticks of caustic potash were employed, the cervax being previously painted liberally with a solution of muriate of cocaine to mitigate the pain. After the separation of the sloughs bleeding returned, and the necessity for a greater destruction of the cervix being evident, the patient was anæsthetised on Sept. 15th. The chief portion of the diseased cervix was scraped away with a curette, posteriorly as far as the junction of the cervix with the vagina, and Pacquelin's thermo-cautery was applied freely to the raw surface. This operation appearing satisfactory, the woman was duly discharged and treated as an out-patient; but the pain and hæmorrhage having soon returned, she became confined to her bed at home, and at the request of Mr. Prowse, who had been summoned to attend her, I examined the patient in consultation with him on Oct. 28th. The general strength had then declined considerably, and there were marked signs of anæmia. The vagina was flaccid, the uterus enlarged and a little prolapsed. That portion of the anterior lip of the cervix which remained after the previous operations was infil-

trated; the posterior lip was absent, so that the finger on being passed upwards along the posterior vaginal wall glided into a conical rugose cavity, whose apex seemed limited superiorly by the internal os. The speedy recurrence and the rapid growth of the neoplasm convinced me that the only means of averting death lay in extirpating the uterus as soon as the necessary arrangements could be made for the operation. But I specially pointed out that the disease had now so far progressed that, even if the uterus were extirpated successfully, a secondary growth might appear at a later date. Moreover, the present condition of the patient would add to the danger of an operation severe *per se*, so that its choice or rejection had to be left to the decision of the patient and her relatives.

As to the methods for vaginal hysterectomy, there are two chief varieties. By the first, extreme and continuous traction is made upon the cervix, whilst the vagina is being severed and the uterine ligaments divided with scissors or knives and separated from the organ with the handle of the scalpel; according to the second plan, the uterus having been first drawn down in order to admit of the separation of the vagina either entirely or partially, the speculum is withdrawn, the operator's hand is introduced into the vagina, and the remainder of the operation is completed with the fingers. Blundell strongly advises that the operation should be conducted by the latter method. It is easy to understand how, by this plan, the danger of wounding the

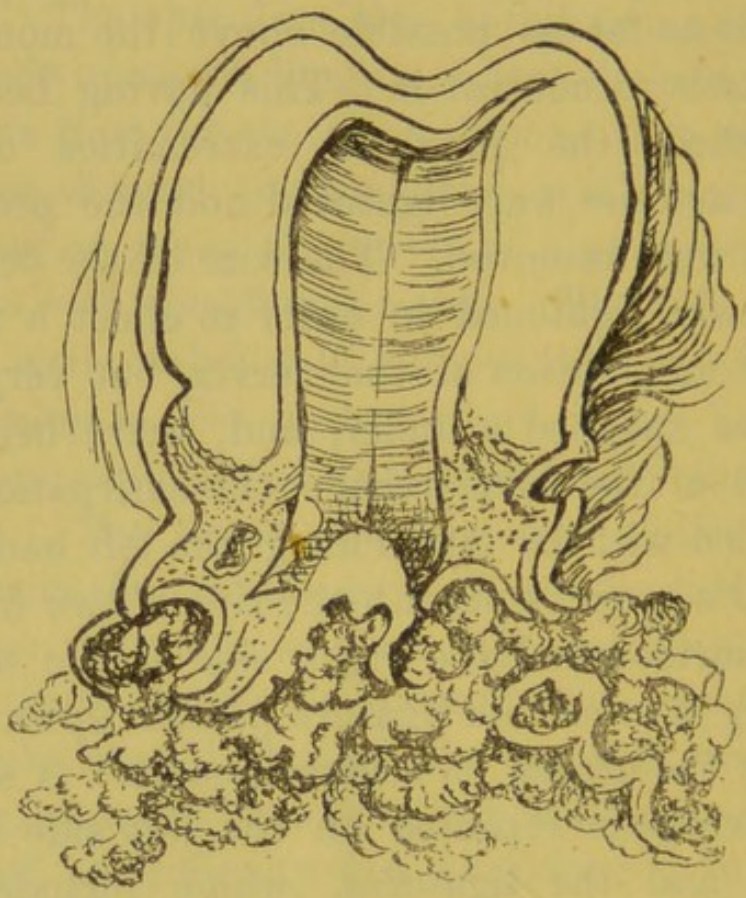
bladder, ureters, small intestine, or rectum is minimised. The chief uterine vessels can be ligatured or clamped before division, and the duration of the procedure diminished. By the former, injury to the important pelvic structures with the point of the scalpel can hardly be avoided; the hæmorrhage from the divided vessels obscures the field of the operation; the traction on the uterus drags down also the viscera which are in anatomical contiguity with it, and the satisfactory enucleation of the uterus is rendered most difficult. More than fifty years ago Blundell removed the uterus four times, with three deaths. His mortality was probably due to hæmorrhage, for he possessed no means of securing the divided vessels. The vaginal arteries will rarely give much trouble if unsecured; but vessels such as the uterine and ovarian arteries cannot safely be trusted unligatured, even though they be severed from the uterus by avulsion or be slightly twisted by flexion of the organ.

On October 30, 1885, at 2.30 P.M., I operated in the following manner. The anæsthetic was administered by Dr. Fenton-Jones, and Messrs. Prowse, Shaw, and Dove assisted me. The patient was placed in the lithotomy position, and the vagina was thoroughly syringed out with a carbolised solution, and afterwards sponged dry. A duckbill speculum was then introduced into the vagina, the urine drawn off with a catheter, a full-sized curved sound passed into the bladder, and the viscus supported against the pubes by this instrument during the operation. The

ulcerated cavity was plugged with iodoform wool (10 per cent.), and a stout silk ligature inserted through the cervix. The cervix and the upper part of the vagina were dusted with finely pulverised iodoform, and semilunar incisions were made, posterior and anterior to the cervix, through the vagina. Laterally the vagina was left intact, the parts here being those where the chief branches of the vaginal arteries enter the uterus. The speculum was withdrawn and traction made upon the ligature. But the cervix was so friable from the cancerous deposit that the ligature tore through the neoplasm, and it was found necessary to grasp the cervix as high upwards as possible with volsellum forceps. The left index-finger, well carbolised, was introduced through the opening in the posterior cul-de-sac between the posterior wall of the uterus and the peritoneum. The latter structure was slowly separated from the uterus as high as the body, and then torn through so that the exploring finger passed into Douglas's space. The right fore-finger was passed through the anterior semilunar opening, and, the bladder being well supported on the staff, no difficulty was experienced in separating the ureters from the uterus and roof of the vagina, and the peritoneum from the uterus for some distance, when it also was torn through. The speculum being introduced into the vagina again, and the anterior vaginal wall elevated with a spoon, the narrow lateral strips of vaginal membrane which had been allowed to remain attached to the uterus were snipped through with blunt-

pointed scissors. The hæmorrhage which occurred was so slight that it was disregarded. The uterine arteries, with the connective tissue surrounding them, were grasped with a pressure-forceps on each side of the cervix, and divided with scissors on the median sides of the forceps. Such profuse hæmorrhage occurred from the uterine extremities of these vessels that the wire of an écraseur was quickly adapted around the cervix and pushed upwards as far as possible above the mouths of the vessels to control it. This having been accomplished, the proximal extremities of the uterine arteries were ligatured and the pressure-forceps were removed. The wire of the écraseur was slowly tightened in order to effect a supra-vaginal amputation of the cervix, but very soon the wire snapped asunder, and, there being no renewal of the hæmorrhage, the extirpation was proceeded with by introducing the left hand into Douglas's space, and with the tips of two fingers, which surmounted the right side of the uterus, catching a stout silk ligature passed upwards in front of the uterus on a blunt needle. A similar manœuvre was repeated on the left side of the uterus, and the ligatures, which included the round and broad ligaments, Fallopian tubes, and the other structures passing from the uterus on either side and contained within the alæ vespertilionis, were tied as tightly as possible. These ligatures were satisfactory in so far as they constricted the broad ligaments and their contents into more or less rounded cords. But they were unsatisfactory in two respects; first, they lay

close to the sides of the uterus; and, secondly, they would not be tight enough to maintain their grasp upon the parts contained within them if the uterus were cut away. Accordingly two straight Wells's pressure-forceps, each $6\frac{3}{4}$ in. in length, with jaws $1\frac{1}{2}$ in. long, were employed to grasp the broad ligaments on the outer side of the ligatures. The broad ligaments were carefully



cut through with scissors close to the uterus, which was easily extracted, and the two ligatures slipped away. The left ovary, rather larger than the normal, protruded into the vagina, and it, with the morsus diaboli, were removed with part of the tube after the application of a silk ligature. The pelvic cavity was carefully cleansed with car-

bolised sponges. All hæmorrhage having ceased, the vagina was packed with iodoform wool. The handles of the pressure-forceps, which just extended beyond the ostium vaginæ, were tied together, a T-bandage applied, and the patient placed in bed, the entire procedure having occupied an hour and a half.

The pressure-forceps were removed by Mr. Prowse thirty hours after the operation, and on Nov. 1st I saw the patient with him in consultation. There being then considerable abdominal pain and tympanites, the temperature having risen to 102° F., the pulse being wiry, and the features having a pinched expression, we decided to seek the advice of Sir Spencer Wells. He advised that the quinine and opium which had been given should be continued, and that the vagina should be kept free from any source of infection by frequent sponging with antiseptic solutions. He expressed a hopeful prognosis, which proved correct, for the temperature fell, and did not rise again above 100°. The patient recovered without manifesting any further symptoms of anxiety, and all discharge from the vagina ceased on Nov. 20th. After the removal of the uterus, its anterior wall was incised in the median line, as shown in Fig. 1. It then appeared that the uterus was invaded by the new growth to a greater extent than we believed before the operation. There was no enlargement of the obturator glands at the time of the operation, but I learn from Mr. Prowse that recurrence has unfortunately taken place in the vagina. He writes as

follows :—"March 7th, 1886. I first noticed some four weeks ago that the walls of the vagina were becoming somewhat harder than usual, and a fortnight ago some suspicious granulations made their appearance in the line of the cicatrix; these have now developed into well-marked ulcerations, and the vaginal walls have increased in hardness, and have become quite nodular to the touch. I have not the slightest doubt as to the recurrence of the disease."

LECTURE II.

DR. WALLACE[1] relates four cases of uterine excision. The first two were vaginal hysterectomies for early cancer, and both patients recovered. The last two were for advanced cancer; one operation was performed by the vaginal, the other by the abdominal, method, and both patients died. With regard to partial excision of the uterus, Dr. Wallace[2] condemns the use of the écraseur, as liable to be followed by hæmorrhage, and as dangerous to the peritoneum and adjacent organs; he also cites a case where it was followed by fatal shock, and therefore he discards the écraseur for amputation. For partial excision Dr. Wallace recommends anterior and posterior semilunar vaginal incisions. The uterine arteries and lower parts of the broad ligaments are to be ligatured at a distance of half an inch from the ureters, and the broad ligaments divided between the ligatures and the uterus. The cervix is to be dragged upon forcibly, and severed as high up as possible with scissors. The stump and flaps are to be washed with iodised water, the vaginal flaps being closed with sutures passed through the stump. Where difficulty is experienced in ligaturing the uterine vessels, Sir

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[1] *Brit. Med. Jour.*, 1884, vol. ii., p. 1277.

[2] Braithwaite's *Retrospect*, vol. lxxxviii., p. 380 *et seq.*

Spencer Wells's pressure-forceps are to be applied and left *in situ* for thirty-six or forty-eight hours. This operation is only to be advised for very early cancer.

Dr. Carl Schroeder considers it always possible to extirpate the entire uterus, even if wholly diseased. The adjacent parts of the vagina can also be removed, but this author questions the advisability of operating in such cases, on account of probable recurrence. Where cancer of the cervical mucous membrane and of the body of the uterus exists, there is always necessity for total extirpation. For extirpation of the uterus, Schroeder advises a circular vaginal incision to be made near the cervix, and Douglas's space to be opened. The fundus uteri (retroflexed) is to be drawn down with a volsellum. The broad ligaments are to be ligatured either singly or in separate portions. Whilst removing the uterus a great deal of tissue is to be left between the ligatures and the organ, otherwise the ligatures will slip. The wound in the peritoneum is to be closed, stitching the pedicles into the angles of the wound. A T-shaped drainage-tube is to be inserted and the end wrapped round with salicylated cotton, which must be renewed as often as it is soaked. The stitches are to be removed in fourteen days. Above all, the uterus must be well drawn down during the operation, a proceeding very difficult where the vagina is narrow and the uterus very much enlarged. Schroeder had seven deaths out of twenty-three cases of vaginal extirpation of the uterus. In his

hands supra-vaginal excision gave a death-rate of eight out of sixty-four cases, but recurrence generally took place in those who survived the operation.

Professor Olshausen,[1] in a letter to Sir Spencer Wells, recommended the employment of the elastic ligature for ligaturing the broad ligaments at a late stage of the operation. He employs a drainage-tube and iodoform gauze. The elastic ligatures are allowed to remain *in situ* for two or three weeks. Altogether Olshausen performed twenty-eight operations in two years and a-half, three of which were supra-vaginal excisions. Of these, all the patients recovered but one with a vesico-vaginal fistula. Out of the twenty-five cases of complete extirpation there were seven deaths—two on the day of operation, three of septicæmia on the second and third day, one of carbolic acid poisoning on the second day, and one of iodoform poisoning on the sixth day. Referring, however, to the last edition of Sir Spencer Wells's work,[2] it appears that up to the end of 1884 Olshausen had thirty-four cases of complete vaginal extirpation, with seven deaths. Since there were seven deaths in the first twenty-five cases, it follows that the last nine operations must have been performed without a death, a circumstance which supports the view that diminishing mortality will accompany increasing

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[1] Braithwaite's *Retrospect*, vol. lxxxviii., p. 392.

[2] *Diagnosis and Surgical Treatment of Abdominal Tumours*, 1885.

operative experience of uterine excision. "Among the cases where there had been no reappearance of disease, two years have elapsed in two cases, in one case two years and a-half, and in two cases three years; but in a larger proportion there has been reappearance in between one and two years." Olshausen emphasises the fact that the special danger of the operation is injury to the ureters, which appear to have escaped by stripping them up, together with the loose cellular tissue which surrounds the supra-vaginal portion, by means of the fingers.

On the other hand, a case is recorded in which M. Jules Boeckel, of Strasburg,[1] *dissected out* the tissues between the uterus and bladder. A urinary fistula from injury to a ureter resulted, for which nephrectomy was performed, and the kidney removed was a healthy one. The patient recovered, left the hospital within six weeks of the first operation, and remained healthy, with the exception of polyuria, passing 1,800 grammes of urine daily. She died in the seventh month, and a necropsy disclosed cancerous degeneration of the abdominal glands and parenchymatous inflammation of the remaining kidney.

A case is reported by Dr. Hennig (Leipsig)[2] where the patient had survived vaginal extirpation eight months at the time of communication. There was then no recurrence. The steps of this operation were—(1) anterior

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[1] *British Medical Journal*, 1884, vol. i., p. 1262.
[2] The *Lancet*, vol. i., 1877, p. 61.

vaginal incision; (2) separation by the fingers of the anterior fold of the peritoneum; (3) anteversion of the uterus and enucleation of the organ; (4) removal of a cancerous nodule from the rectum. The wound in the rectum was closed by sutures. The entire length of the uterus was five inches and a-half, and the cervix was entirely invaded by the neoplasm. The left ovary and Fallopian tube were removed, also half the right Fallopian tube. Enucleation, without opening the peritoneum, had been intended, but had not succeeded. Considerable peritonitis followed, but little hæmorrhage. A recto-vaginal fistula resulted, which was operated upon four weeks later. Four months afterwards a small recurrent nodule, which had arisen near the site of the fistula, was excised. There was no further recurrence.

Uterine excision by separation of the peritoneum was first proposed and successfully performed by Langenbeck. The woman survived the operation twenty-six years, but the uterus was not cancerous.

Dr. Gusserow,[1] one of the latest writers on uterine extirpation, has collected 253 cases (where the operation was performed by the vaginal method), with a mortality of 23·3 per cent., the list including operations from the time of Sauter (1822), Blundell (1828), and Récamier (1829).

Pfannestiel collects 154 operations up to 1882, with a mortality of 23 per cent.; but after 1882,

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[1] *Deutsche Chirurgie*, 1886, Lieferung 57.

thirty-six cases, with a mortality of only 8·3 per cent.

Gusserow advises the use of the curette and cautery as preliminary to making the vaginal and peritoneal incisions, so that when the uterus is retroflexed the chance of auto-infection from the cancerous cervix will not exist. He considers flexion of the organ to be recommended as tending to check hæmorrhage by torsion.

These various modifications of the operation have been detailed because a study of the differences of procedure which they present may serve to afford the basis of a definite plan of operating, which may probably afford greater successes than those which have been devised in the past, and to further this object I have recently practised uterine extirpation upon the dead body, which enables me to submit the following points for consideration :—

1. There may be two semi-lunar vaginal incisions or one circular one. If the circular incision be chosen, the divided vaginal arteries can be readily secured by hæmostatic forceps. Before the incision is made the cervix should be well drawn down, thoroughly exposed, and the finger passed along the line of the proposed section, which should be principally made with blunt-pointed scissors, or a probe-pointed bistoury. The bladder should be supported with a staff throughout the operation.

2. The ureters are to be separated from the sides of the uterus with the fingers, and the peritoneum stripped upwards over the organ as high

as possible, so that after its removal a funnel-shaped peritoneal flap will remain.

3. The uterine arteries should be secured prior to division.

4. The uterus should not be flexed, since such a course involves great difficulty in dealing with the broad ligaments, and might add to the risk of sepsis from the cancerous cervix.

5. The broad ligaments are to be secured as follows:—The peritoneal cavity having been

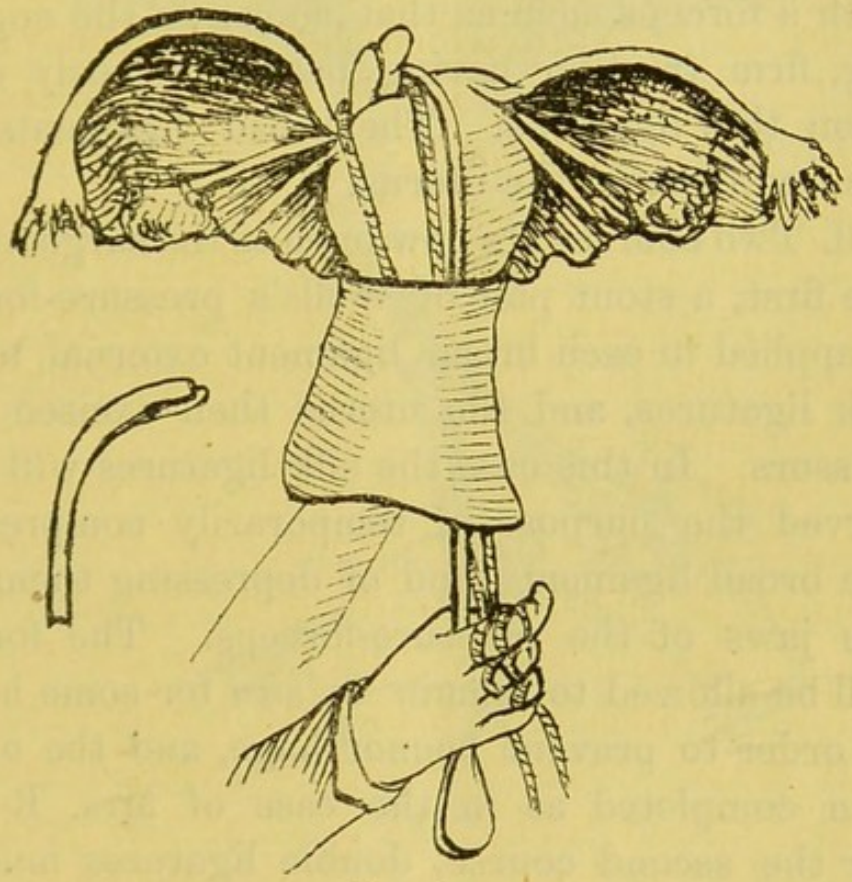

Fig. 2.

freely opened in front of and behind the uterus, tearing through the peritoneum with the finger-nails, the operator's left hand is to be introduced into Douglas's pouch, and the uterus pushed upwards towards the abdominal cavity in order to gain space (Fig. 2). A loop of stout carbolised

silk must be passed upwards in front of the uterus, by means of a staff shaped like a vesical sound, having a notch for the silk at the top of its beak. This loop can be caught by the tips of the left index and middle fingers at the summit of the uterus, and one end drawn downwards. By a similar manœuvre a second loop can be passed over the other broad ligament (Fig. 3). Perforated shot are to be slipped upwards, each embracing a ligature, and clamped by pressure with a forceps such as that shown in the engraving, firm traction having been previously made upon the ligatures. The broad ligaments are secured close to the uterus.

6. Two courses are now open to the surgeon. By the first, a stout pair of Wells's pressure-forceps is applied to each broad ligament external to the silk ligatures, and the uterus then excised with scissors. In this case the silk ligatures will have served the purpose of temporarily compressing the broad ligaments and of depressing them into the jaws of the pressure-forceps. The forceps will be allowed to remain *in situ* for some hours, in order to prevent hæmorrhage, and the operation completed as in the case of Mrs. R——. By the second course, double ligatures must be applied to the alæ vespertilionis, and these structures divided on either side between the double ligatures. The operation will then be completed by closing the peritoneal cavity, after the manner ordinarily adopted in abdominal operations.

It has been argued that the Fallopian tubes are

part of the uterus, and therefore, unless they be removed also, excision of the uterus only, for cancer, is an imperfect procedure. Without discussing this debatable point, I will content myself by stating that after the excision of the uterus in the manner indicated, the operator can,

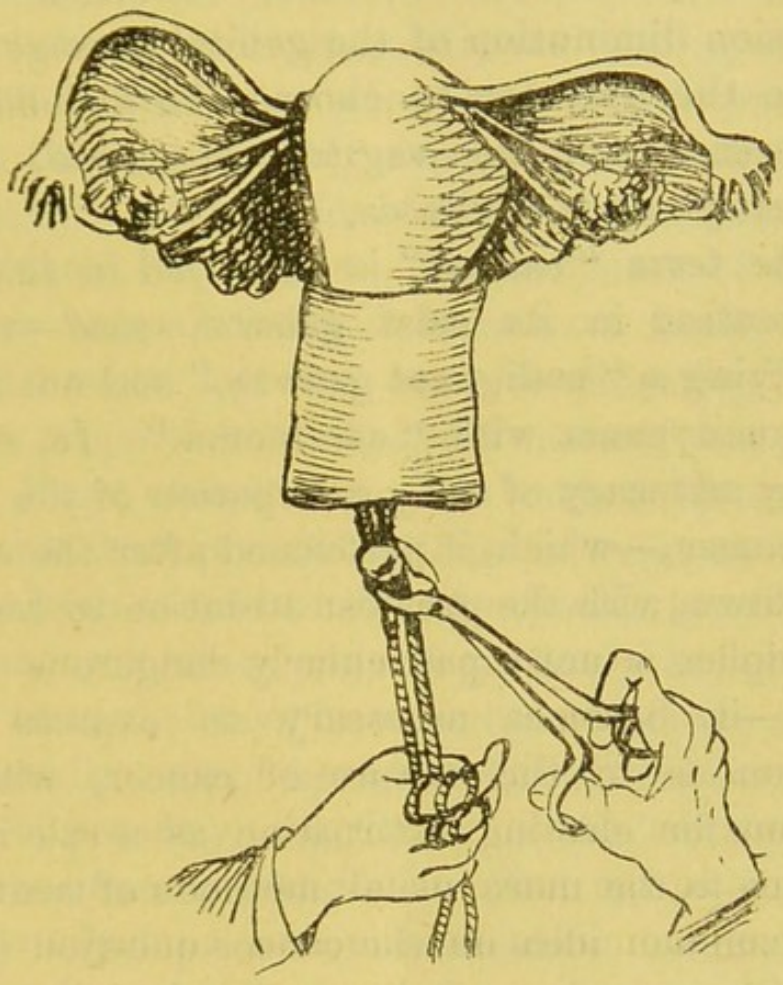

Fig. 3.

if he please, draw down consecutively each appendage, apply a ligature, and remove it. But in so doing, care must be exercised to avoid including the ureters in the ligatures. Virginity naturally increases the difficulty of vaginal hysterectomy. In one of the operations I performed upon the dead body, the subject was a virgin, and

it became necessary to incise the hymen in the median line with scissors. It was not necessary to divide the perineum, and the vagina was readily distended to a size large enough to admit the introduction of the entire hand. Deformity of the pelvis would seriously complicate the operation, and this or other conditions which occasion diminution of the genital passage would guide the operator to choose the abdominal in preference to the vaginal operation, where hysterectomy is advisable.

The term "cancer" is employed in this communication in its most general sense—viz., as signifying a "malignant growth," and not merely as synonymous with "carcinoma." In support of my advocacy of early extirpation of the uterus for cancer,—which, if performed after the manner laid down, with the greatest attention to Listerian principles, is not a particularly dangerous operation,—it becomes necessary to express some opinion as to the nature of cancer, with the reasons for electing extirpation as a rule in preference to the more usual methods of treatment. The common idea on the cancer question (which is quite wrong) runs thus: "A hereditary and constitutional disease, distinguished by the presence of a tumour, which, if excised, generally recurs and destroys life. Why, therefore, operate for cancer which can at best retard the disease only, and is a course associated sometimes with a little, but sometimes with grave, danger? Let us pin our faith to harmless remedies and patent nostrums." Speaking generally, a cancer tumour

arises from the combination of predisposing and exciting causes. In this, as in some other diseases, the degree of the one class of factors is inversely proportionate to the other. Locality has been recently urged as a cause of cancer, and statistics have been collected which argue forcibly in favour of this opinion. But as to whether certain atmospheric or telluric conditions predispose to or excite cancer, or what such conditions be, though they presumably exist, is quite unknown. Heredity is most undoubtedly a most powerful predisponent to cancer. The influence of heredity has been questioned because a family history of cancer has not been forthcoming in a certain proportion of hospital cases; but Sir James Paget has shown that such a history is obtainable from private patients in twice as large a proportion. Add to this the circumstance that even among private patients a family history of cancer cannot always be traced, and is very often intentionally suppressed, and the evidence in favour of heredity as a factor in the etiology of cancer becomes irrefragible. Mrs. R——'s case may be cited as a not uncommon instance of hereditary cancer, where the primary growth appeared in two sisters, probably in the same site. Mrs. R—— applied for treatment for cancer of the cervix uteri, with the history that a sister had died of "cancer of the bladder"—*i.e.*, probably uterine cancer extending into the bladder. The *ipsissima verba* of a woman who, I recollect, consulted me last summer, were: "Sir, two of my sisters have died of cancer of the

womb, and now I have severe pain in the womb, and an offensive discharge." In what respect syphilis influences cancer is questionable. That certain syphilitic lesions are frequently the precursors of cancer is admitted by all, but whether such lesions exert an influence which specifically initiates cancer or not is a matter of doubt. But this remains certain : many cancer-tumours arise from obviously exciting causes, which may be physiological, dependent upon the evolution or retrogression of the organs (*e.g.*, the breast and uterus), or upon the natural decay of the tissues; or extraneous, such as smoker's lip cancer, or chimney-sweep's scrotal epithelioma (where the development of the growth is favoured by the scrotal corrugations which retain the soot). Fissures and ulcers, either simple or of specific origin, not uncommonly form the cradle and starting-point for epithelial growth.

Quite recently, the results of most valuable researches by Schuchardt have been published[1] in reference to his observations on the origin of cancer from chronic inflammations of the mucous membrane and skin :—1. He traces the steps between buccal and lingual psoriasis and cancer of the cheek and tongue. A case fell under the observation of Schuchardt where psoriasis of the tongue had existed for many years in a dormant condition, but ultimately assumed the character of epithelioma. The tongue having been removed, the transition from the psoriasis to the

[1] Volckmann's *Sammlung*, No. 259.

epithelioma was demonstrated microscopically. The transition steps of epithelium from a chronic inflammation to a malignant growth have thus been proved; but why epithelium, at one time homotopic, may eventually become heterotopic, is the great question in the pathology of cancer which still remains to be solved. 2. Schuchardt also draws attention to the development of cancer of the penis from "psoriasis preputialis," by which he means a condition of phimosis with chronic inflammation of the prepuce. In confirmation of this, I may refer to the well-known origin of epithelioma from venereal warts which have been allowed to vegetate beneath the foreskin. 3. Instances are also adduced of "seborrhagische Hautcarcinome," or cancer arising from chronic inflammation of sebaceous glands.

The mode of origin of epithelioma of the cervix uteri is a hotbed of debate. By some it is contended that fissures, simple ulcers, and erosions of the cervix uteri give rise to no symptoms, produce no inconvenience, and are harmless; by others, that these conditions are a constant source of misery, are a cause of various reflex phenomena, and may serve as a suitable nidus for the development of cancer. With neither view do I entirely agree, but incline to the latter. A small fissure or ulcer of the rectum, a sore spot on the mucosa of the tongue or larynx, unquestionably give rise to a varying degree of distress; how, therefore, an erosion or ulcer on the cervix uteri can never produce symptoms either *per se* or in association with its usual concomitant con-

ditions is difficult to understand. The initiation of cancer by external irritants has been dwelt upon at some length; its frequent origin from leucoma of the tongue, or from fissures and abrasions of the mucosa of that organ, has been proved, together with the logical prevention of cancer by the removal of such small foci by treatment, before they have assumed a chronic condition and become developed into a chronic inflammation. We are therefore constrained to think that fissures and simple ulcers of the cervix uteri, when permitted to run their course unchecked, frequently become the precursors of uterine cancer. At all events, however easy it may be to draw a hard-and-fast line upon paper of the differential diagnosis of simple chronic infiltration of the cervix and of the infiltration due to malignant disease, or to give the differential diagnosis of simple and cancerous ulceration, yet clinically no more difficult puzzle is presented to the practitioner than to form a correct opinion in many instances which fall under his observation. Such, in outline, is the evidence which supports the view that a cancer-tumour is, whilst small, a purely local affection, and immunity from recurrence usually attends early and *free* excisions of these tumours.

Unfortunately for themselves, patients affected with cancer are not usually presented to operators whilst the primary tumours are in their earliest stages, and the bulk of cases operated upon are in consequence those where the disease has pro-

gressed already too far to render the hope of cure by surgical treatment probable.

In conclusion, I venture to say that I have brought forward sufficient reasons to support the hope that vaginal extirpation of the uterus for cancer is an operation which will save life when performed sufficiently early in the course of the disease. In Mrs. R——'s case, Mr. Prowse has reported that the neoplasm has unfortunately recurred in the vaginal cicatrix in the fourth month after extirpation of the uterus. But the disease was far advanced at the time of operation, as shown by Fig. 1. My present feeling is wholly opposed to extirpation of the uterus for cancer of the fundus, chiefly on account of the difficulty which attends the diagnosis and precise determination of the extent of the disease in such cases. The death-rate following such operations will be high, and the chance of immunity from recurrence small. In cases of early cancer of the cervix the limitation of the neoplasm can be ascertained with tolerable certainty; the removal of the upper portion of the vagina together with the uterus would not add much to the risk of the operation, and would notably diminish the probability of recurrence. These are the kind of cases for which vaginal hysterectomy should be afforded a fair trial, and the results ought to be as good, at least, as those of recognised operations for cancer in other parts of the body. Mr. Foreman, writing from Sydney, states that he has excised the uterus for cancer per vaginam five times successfully, so far as the

immediate results were considered. From this experience he adds: "I am convinced that, if we only get the cases before the neighbouring parts are infiltrated, the ultimate results would be far better than the removal of cancerous breasts. If a case be too fixed for removal, I leave it alone. In future I shall always extirpate where it is possible to do so."

POSTSCRIPT.

Mr. Prowse, in a letter to me dated Sept. 29th, 1886, states that since he last wrote to me, "some seven months ago, as to the condition of Mrs. R——, she went on fairly well for three months, when, unfortunately, the disease made a communication with the bowel at the upper part of the vagina, in the thin line of the cicatrix. Since then she has passed nothing from the bowel per vias naturales, and the constant irritation of foreign matter passing through the vagina has rendered her life a great burden.

"There is now an opening into the bowel sufficiently large to admit the finger. This is surrounded by bleeding granulations, and the whole dome of the vagina is a mass of hardened tissue. There is no communication with the bladder.

"I think the extremity of life to be six months."

C. E. J.

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