ON SOME POINTS
IN THE
SUPRA-VAGINAL AMPUTATION OF THE
CERVIX UTERI FOR CANCER,

WITH
SPECIAL REFERENCE TO THE METHODS ADOPTED IN
CASES WHERE FOR TWO YEARS AND UPWARDS
THE DISEASE HAS NOT RECURRED.

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THE supra-vaginal amputation of the cervix uteri for cancer is an operation that has only been introduced into this country comparatively recently. Probably it is within the mark to say that it has only been practised here during the last ten years.

Briefly, the operation consists of removing the whole cervix at the level of the internal os, the bladder having been previously separated from the anterior aspect of the cervix to the level of the vesico-uterine pouch of peritoneum. A portion of the peritoneum forming Douglas's pouch, and corresponding to the posterior

aspect of the cervix, may or may not have to be removed at the same time.

I propose to consider the subject shortly under the following heads :

1. The indications and contra-indications for the operation.

2. Its mortality.

3. The results as regards recurrence.

4. The details of the operation in those of my cases where the disease has not recurred.

It should be stated that this paper is not intended as a comprehensive survey of the operation generally, but merely deals with my own experience of it, which consists of nineteen cases.

1. *The indications for the operation.*—The disease tends to spread—

- (a) To the vagina ;

- (b) To the connective tissue round the cervix, thus involving the bladder, the broad ligaments, and the utero-sacral ligaments ; and

- (c) To the body of the uterus.

So far as my own observation of cases and specimens goes, the tendency to spread in this last direction is comparatively slight. Even when the disease has spread to the body of the uterus, it has in most cases, though certainly not in all, already spread so extensively either to the vagina, or into the connective tissue round the cervix, that complete removal of the diseased tissue has become impossible, and not to be accomplished even by removing the whole uterus.

The object of any operation in these cases is of course to give the patient immunity from the disease, either completely, or at any rate for a considerable period ; and unless the intended operation, whether it be the supra-vaginal amputation of the cervix or total extirpation of the uterus, can so thoroughly remove all the parts affected as to give a good chance of this, it does not seem to be worth doing.

For the success of the supra-vaginal amputation it is generally essential that the growth should not have spread to the vaginal walls, nor have involved the connective tissue round the cervix. A very limited extension of a *superficial* growth on to the vagina is not always a contra-indication, as it may be met now and then by making the incisions sufficiently widely, and afterwards applying the cautery thoroughly to the cut edge of the vaginal wall towards which the growth was adjacent. Even a limited extension of the growth to the vagina, while not an absolute contra-indication for the supra-vaginal amputation, is, however, of highly unfavorable augury as regards recurrence.

Extension of the disease into the connective tissue round the cervix is usually an absolute contra-indication when it can be clearly recognised to have occurred. This often cannot be done with certainty. I refer to that group of cases where the uterus is very fairly movable and where there are the so-called "thickenings," or bands of a more or less definite character, to be felt running outwards from the cervix, either laterally in the direction of the broad ligaments or backwards in the direction of the utero-sacral ligaments.

Bands felt in the situations mentioned may be due to extension of the disease; but bands of this unfavorable import may be, in certain cases, closely simulated (*a*) by the cicatricial bands or bridles so commonly met with after the menopause as to be within the limits of normal; (*b*) by the thickening resulting from old inflammatory mischief, parametric and perimetritic; and (*c*) in the case of bands in the situation of the utero-sacral ligaments by an unusually definite condition of these ligaments, apart from inflammation, or as the result of it. Every gynaecologist must be familiar with cases where, apart altogether from malignant disease of the uterus, the utero-sacral ligaments have been unusually well defined.

In the group of cases referred to, therefore, where there are such bands, and where the uterus is very fairly

movable, I think it best to give the patient the benefit of the fairly even chance (that the bands may not indicate extension), and perform the operation.

Every now and again a case may be met with where a very limited extension of the disease into one broad ligament may be successfully dealt with by extirpating the uterus and placing a pair of large pressure-forceps for forty-eight hours on the broad ligament in question, as far outwards as appears safe, with the object of causing sloughing and so completely removing the disease. I have had a case of this kind, and up to the present time—two years since the operation—no recurrence has taken place. I hope to record this case fully on another occasion.

Both the supra-vaginal amputation of the cervix and total extirpation of the uterus are absolutely contra-indicated when, for any reason whatever, the uterus cannot be drawn down so that the os uteri is on a level with the orifice of the vulva.

As regards the cases where extension has taken place towards the uterus, the vagina and connective tissue round the cervix not being involved, vaginal extirpation of the uterus is indicated, and supra-vaginal amputation of the cervix contra-indicated. The fact of this extension cannot usually be recognised except at the time of operation, and therefore in every case one should begin the operation prepared to do either the supra-vaginal amputation or total extirpation.

The mortality of the supra-vaginal amputation.—The mortality has a special interest as bearing on the question whether the supra-vaginal amputation of the cervix or total extirpation of the uterus should be the usual operation for cancer of the cervix. As has been said above, it is not always possible to tell whether or not the body of the uterus has been invaded by the growth. This being so, it is argued that if high amputation of the cervix and vaginal hysterectomy have an approximately equal mortality, it is better to remove the whole uterus on the chance that the body of it may be involved. While

recognising that the mortality of total extirpation has been considerably reduced of late years, it still seems to me that removal of the whole uterus is a more serious operation than the supra-vaginal amputation of the cervix, and the results of my own cases bear out this opinion. My results are as follows :—I have performed the supra-vaginal amputation of the cervix nineteen times without a death, and removed the whole uterus for cancer *per vaginam* six times with one death. Three of the total hysterectomies were for primary cancer of the body of the uterus, and all these recovered ; three were for cancer of the cervix, and one of these died.

As regards recurrence.—My first ten cases of supra-vaginal amputation of the cervix for cancer were recorded in the 'Lancet' of March 10th, 1888. Three of them were in good health and free from recurrence for two years and upwards after the operation. One of these three (No. 9 in the table) had recurrence about three years after, and died. One of them (No. 3) has not been seen since two years after the operation, when she was in good health and without recurrence. One of them (No. 6) was in good health and free from recurrence when I last saw her three years after the operation. Quite recently (October 3rd, 1892) Dr. Dundas Grant (who sent this case to me in the first instance) told me that he had lately seen her, and that she was still quite well, though it is now more than five years since the operation.

As regards the remaining nine cases in which I have performed the supra-vaginal amputation, the results are as follows :

In one (No. 19) the operation was incomplete, *i. e.* I felt certain that the disease had extended beyond the limits of the part removed.

In the remaining eight cases the operation was complete. In four of these (Nos. 12, 16, 17, 18) the patients are well and free from recurrence.

No. 12 was operated upon on May 31st, 1888—an example of the cauliflower growth ; microscopical sec-

tions show it to be a typical squamous epithelioma. I last examined her on October 7th, 1892, and found her free from recurrence. I may add that the sections have been examined by various independent observers; among others by Dr. John Williams and Mr. Butlin.

This patient was sent to me by Dr. Cursham Corner, of Mile End, who was present at the operation.

No. 16, who was three months pregnant at the time of the operation, is still quite well and free from recurrence. The operation was performed at the London Hospital on August 26th, 1889. I have seen this patient regularly at least once a month up to the present time, and examined her from time to time. There has never been any sign of recurrence.

A drawing of the specimen and of a section of it accompany this paper. The growth is a typical example of a columnar epithelioma. Sections of this also have been examined by many independent observers, among them by Dr. John Williams and Mr. Butlin.

No. 17 was a private case. I have not examined her since the operation, which was done on February 18th, 1890; but I have seen a letter from her, dated two years after the operation, in which she says she is in good health and free from symptoms. It so happens that quite recently I found that one of the sisters at the London Hospital knows the patient very well, and often sees her. She confirms the patient's account of herself.

A drawing of the specimen, and of a section of it, accompany this paper. The growth is an example of columnar epithelioma.

In these three cases, then, the evidence, on the one hand of malignancy, and on the other of the non-recurrence of the disease, is quite conclusive.

As regards No. 18, it is a case where there may perhaps be two opinions as to the nature of the growth. Sections of it under the microscope show numerous glandular cavities, lined by a single layer of cylindrical epithelium. My own belief is that clinically it was

malignant. The symptoms and physical signs were in favour of its being so ; but still more convincing to my mind was the fact that extension had taken place on to the anterior vaginal wall. The portion of the anterior vaginal wall thus involved was removed at the time of operation, and sections of it show the same glandular cavities as sections from the growth in the cervix itself. As no such glandular cavities are normally present in the vaginal wall, this extension seems very hard to explain, unless the growth itself was of a malignant nature.

The operation was done on May 7th, 1891, and at present the patient is quite well, and there is no sign of recurrence.

To return to Cases 12, 16, and 17, where the evidence of malignancy is conclusive, and where no recurrence has as yet taken place, the details are as follows :

CASE 12.—Mary C—, æt. 42, at that time matron of the East London Nursing Association, was sent to me on the 19th of May, 1888.

She had been married nineteen years, and had had two children, the last sixteen years ago. She had had no miscarriages. She had pelvic peritonitis after the second confinement.

History of the present illness.—For the last two or three months she has had pain in the lower abdomen, especially in the left iliac region on walking. The pain shoots down the left leg. She is always easier on lying down.

Five weeks ago she had a discharge from the vagina “like coffee grounds.” It was offensive. This discharge continued till a week later, when the ordinary menstrual period came on.

Though it is now a week since her last period, she is still losing a brown discharge.

She did not think she had been getting thinner.

The catamenia have usually been regular every four weeks, lasting six days, and attended with a good deal of pain in the left iliac region for three days before and

during the first twenty-four hours of the period, but not afterwards.

For many years she has been subject to a white discharge between the periods, but for the last two or three months the intermenstrual discharge has been yellow, or sometimes brown.

On examination a flat "cauliflower" growth was found on the posterior lip of the cervix. It was raised about one sixteenth of an inch above the adjacent healthy surface, and occupied an area roughly about the size of a two-shilling piece. It bled readily on touching it. The uterus was freely movable.

She readily consented to have done whatever might be thought desirable, and accordingly, on May 31st, 1888, I performed the supra-vaginal amputation of the cervix at the London Hospital.

The chief points requiring mention as regards the operation are that the incisions made through the vaginal walls, in order to free the cervix, were made as far from the growth as seemed safe ; also that it was found desirable to incise the perinæum, so as to afford ample room for the various manipulations. Douglas's pouch was not opened. No ligatures were used, but pressure-forceps were left on bleeding vessels. These were removed in twenty-four hours.

The length of the cervix measured, after being six days in spirit, $2\frac{1}{4}$ inches.

On June 7th, in order still further to increase her chance of immunity from recurrence, I applied Paquelin's cautery to the posterior and lateral aspects of the wound left after removal of the cervix.

The patient's recovery was quite uneventful : the temperature only once reached 100° , which was on the evening of June 2nd ; on other occasions it was never above 99.5° .

Before the operation her weight was 8 st. $11\frac{1}{2}$ lbs. ; and when I last saw her, October 7th, 1892, it was 9 st. 10 lbs. I examined her on that date, and found nothing to indicate recurrence.

DESCRIPTION OF PLATE I.

On some Points in the Supra-vaginal Amputation of the Cervix
Uteri for Cancer (Dr. ARTHUR H. N. LEWERS).

FIG. 1.—A drawing of the cervix removed in Case 12 (Mary Core, The Hollies, Blandford Road, Ealing). The view is that that would have been obtained through the speculum before removal of the cervix. A “cauliflower” growth is seen growing from the posterior lip. Date of supra-vaginal amputation of the cervix, May 31st, 1888.

FIG. 2.—The cervix removed by supra-vaginal amputation in Case 16 (Mrs. Austin). Side view of the specimen. A small glass rod has been passed along the cervical canal. Date of operation August 26th, 1889.

FIG. 3.—The cervix removed by supra-vaginal amputation in Case 17 (Mrs. Burne, Wasing Rectory, Reading). The view is that which would have been obtained through a speculum before the operation. A soft “cauliflower” growth is seen attached chiefly to the right side of the vaginal portion. Date of operation February 18th, 1890.

For the microscopic appearances of the growth in these figures see following Plates.

DESCRIPTION OF PLATE II.

On some Points in the Supra-vaginal Amputation of the Cervix
Uteri for Cancer (Dr. ARTHUR H. N. LEWEES).

FIG. 1.—Portion of the growth shown in fig. 1, Plate I, under a high power. (Hartnack, obj. 8, eye-piece 2.) From Case 12.

FIG. 2.—Portion of the same growth under a low power. Hartnack, obj. 4, eye-piece 2.)

The growth is a typical squamous-celled epithelioma. From Case 12.

DESCRIPTION OF PLATE III.

On some Points in the Supra-vaginal Amputation of the Cervix
Uteri for Cancer (Dr. ARTHUR H. N. LEWERS).

FIG. 1.—A portion of the growth shown in Plate I, fig. 2, under
a high power. (Hartnack, obj. 8, eye-piece 2.)

It is a typical columnar-celled epithelioma. From Case 16.

FIG. 2.—A portion of the growth shown in Plate I, fig. 3, seen
under a high power. (Hartnack, obj. 8, eye-piece 2.)

An example of columnar-celled epithelioma. From Case 17.

There is in this case unfortunately some tendency to alcoholism, and she has been from time to time ill with gastric catarrh, due, I believe, to this cause, for a week or so at a time; otherwise she has been quite well and able to do her work ever since the operation.

CASE 16.—Eliza A—, æt. 40, was admitted into the London Hospital on the 21st of August, 1889.

She had been married twenty-one years, and had had eight children and two miscarriages. The last confinement was a year and nine months before admission, and the last miscarriage four years ago.

History of the illness.—In October, 1888, she began to suffer from a discharge, at first white, but afterwards yellow, and with a little blood in it constantly. In March, 1889, she had an attack of severe flooding, and she has had similar attacks every month up to the time of her admission. Large clots were passed each time.

The catamenia appeared when she was ten years old; she then “saw nothing” till she was between thirteen and fourteen, when she became quite regular every four weeks.

Her appetite has been bad since the beginning of the illness.

State on admission.—The external genitals and neighbouring skin are inflamed simply, as they become in patients who are the subjects of a constant discharge.

The vaginal portion of the cervix is considerably enlarged in circumference. There is an irregular nodular growth, chiefly involving the posterior lip. It is hard but brittle, and bleeds readily on touching it. The growth has a yellowish colour. The uterus was freely movable and somewhat enlarged, though its exact size was not made out well till just before the operation, when the patient was under the influence of an anæsthetic. The patient was very fat, and her weight was 12 st. 3 lbs.

On August 26th (1889) the supra-vaginal amputation

of the cervix was performed. When the cervix had been freed up to the level of the internal os, it was cut off at that level with Paquelin's cautery ; and the cautery was also applied to the posterior and lateral aspects of the wound. In freeing the posterior aspect of the cervix Douglas's pouch was opened to a small extent, the opening being about a quarter of an inch in length transversely.

The length of the cervix after removal was one inch and a quarter.

Four pairs of small pressure-forceps were left on bleeding vessels. They were taken off twenty-four hours later.

The highest temperature was 100°, which was reached on four occasions—the evening of the 2nd, 3rd, 5th, and 7th days. The pulse rate never exceeded 85.

It may be mentioned that the examination just before the operation showed that she was about three months pregnant, and she miscarried on the evening of August 29th.

The patient did quite well, and left the hospital on September 12th.

The fact that she was pregnant at the time of operation caused the parts to be unusually vascular ; and besides, in general, pregnancy is an unfavorable complication as regards recurrence, the physiological activity of the pregnant condition appearing to favour an early infiltration of the surrounding tissues.

However, in this particular case the patient, who has been very regular in coming to report herself at the hospital, is still quite well, now over three years since the operation, and there is no sign whatever of recurrence.

CASE 17.—Mrs. B—, a clergyman's wife, 53 years of age, was first seen by me on the 24th of January, 1890. She had had two confinements, the last twenty-two years ago.

She was regular till about three years ago, when the menopause occurred. She has been feeling weaker since

last summer (1889), and since that time has had a yellow vaginal discharge, which has been blood-stained from time to time. She has had no pain.

On examination, a cauliflower-like growth, about the size of half a walnut, was found attached to the right half of the cervix. It was very brittle, and bled readily on touching it.

A few days later the patient was examined carefully under an anæsthetic with the object of ascertaining the fitness of the case for operation. The uterus was quite freely movable, and there was no evidence of the disease having spread beyond the limits of the cervix.

The patient was advised to have either supra-vaginal amputation of the cervix performed, or vaginal hysterectomy, according to what might seem necessary at the time of the operation.

She readily consented, and accordingly the operation was done on the 18th of February, 1890.

The points in the operation that require particular mention are, that Douglas's pouch was very freely opened, the opening being an inch in measurement transversely. The cervix was removed at the level of the internal os, and it was immediately slit up to see how near the obviously diseased part was to the internal os. There seemed to be an ample width of apparently healthy tissue between the points mentioned, and accordingly I decided to be content with removing the cervix, although it would have been very easy to have removed the remainder of the uterus, the body of it being quite small from senile atrophy.

Although Douglas's pouch had been opened so freely, I applied Paquelin's cautery to the right aspect of the wound. It should also be mentioned that the cervix was cut off from the body of the uterus by the cautery, after having been freed from its attachments up to the level of the internal os in the usual way.

The opening in Douglas's pouch was closed with one suture, and a small india-rubber drainage tube was left,

so that one end was just within the peritoneal cavity, and the other in the vagina. The tube was found loose in the vagina on the next day.

Pressure-forceps were left on bleeding points for thirty-six hours. The patient subsequently did very well, the highest temperature was 101° (on the evening of the second day), and after that it did not rise above normal.

Among others present at the operation was Dr. Hugh Smith, of Englefield House, Highgate, who was at that time Resident Accoucheur at the London Hospital.

As above mentioned I have not seen this case since the operation, but I have seen a letter from her dated February 17th, 1892, saying she was then (two years after the operation) quite well and free from symptoms.

(For report of the discussion on this paper, see 'Proceedings of the Royal Medical and Chirurgical Society,' Third Series, vol. v, p. 34.)