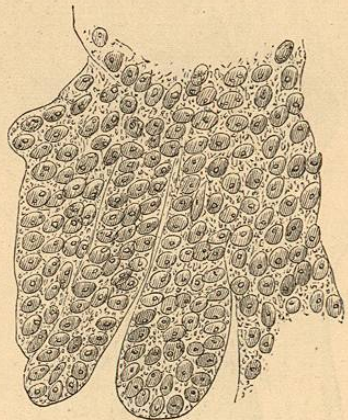


The divergence of opinions as to the cancerous nature of this growth is difficult to reconcile. But if it be admitted—and clinical observation dictates the admission—that the cauliflower excrescence frequently springs from a base of medullary cancer, or at some stage is associated with cancer, there is strong ground for taking the more unfavorable view. Certainly, in some cases the cauliflower form becomes lost in the ordinary characters of medullary cancer; appearing to be simply a phase in the development of the latter. Moreover, with cauliflower excrescence of the uterus, malignant disease of undoubted form is occasionally found in other parts of the body. At the same time it is eminently important, in a therapeutical aspect, to bear in mind the apparently lesser degree of malignancy of the cauliflower excrescence, and its greater concentration in, or limitation to, the vaginal-portion of the cervix, up to a certain period of its growth, than is at all common with regard to the medullary cancer. Ablation of the growth by amputation of the vaginal-portion is fairly successful, if performed during the stage of localization.

It is not easy to get an opportunity of examining the disease in its initiative stages. The symptoms produced are rarely such as to lead the patient to seek advice. When first seen, the cervix has been already somewhat increased in size, the os uteri not open, but its lips flattened and expanded, so that their edge, which felt a little ragged, projected a line or two beyond the circumference of the cervix, while their surface

FIG. 173.



Cauliflower Growth of the Cervix Uteri (Sarcoma).

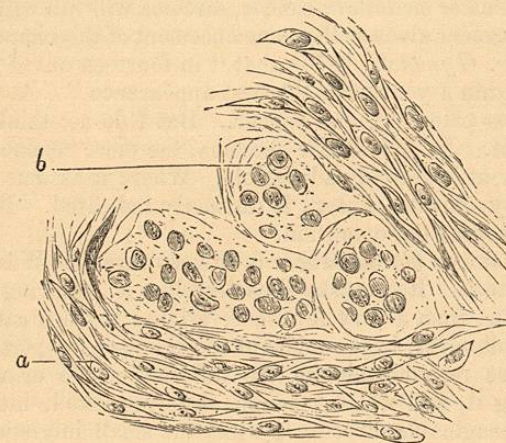
From a specimen furnished by the author, removed by galvano-caustic operation. (By H. Arnott.)

was rough and granular. This irregularity was seen to be produced by the aggregation of numerous small somewhat flattened papillæ of a reddish color, semi-transparent, and often bleeding very easily. Generally, these small papillæ increase in size, and form a distinct out-growth from the whole circumference of the os uteri of the size of an egg, an apple, or even larger. These growths are split up by deep fissures into lobules of various size, all of which seem to be connected together at their base. The dimensions of these growths are not in general the same throughout,

but they spring from the surface of the os uteri by a short thick pedicle, which is the elongated and hypertrophied cervix, and then expand below into the peculiar cauliflower shape. At the base the substance is much firmer. Though the vagina does not by any means escape from participation in the disease, and a granular or papillary structure may be felt sometimes extending over its roof, and for some distance along one or other wall, yet this is by no means constant. The tendency to involve adjacent parts is far less than in ordinary cancer. Usually the outgrowth, in the course of time, disappears in part, under the processes of alternate partial death and reproduction which characterize the medullary cancer. The irregular, sharp-cut edge of the os, whence it grew, is at first felt granular and mucous within, but afterwards grows thicker and nodulated, assuming by degrees all the characters of a part which has from the first been the seat of medullary cancer.

3. *Spindle-cell sarcoma* is a structure made up of densely-packed cells having a spindle shape, being usually arrayed in a tolerably regular manner, and containing generally single, rarely two, comparatively large oval nuclei. In neither of the cases of uterine sarcoma was anything

FIG. 174.



Spindle-cell Sarcoma.

Thin section, showing in the centre groups of cells divided transversely. (After H. Arnott.)

like encapsulation observed, either in the uterus or in the nodules in the lungs or glands. The sarcoma in this respect followed what H. Arnott believes to be the general rule, although sarcomatous tumors are thought by many to be usually invested by a capsule of some kind, instead of freely infiltrating surrounding tissues.

Gusserow (*Archiv für Gynäkol.*, 1870) says sarcoma is often confounded with carcinoma and canceroid. He says C. Mayer, Virchow, L. Mayer, Weit, and West give cases of hard sarcoma under the name "recurrent fibroids." The recurrence is tardy compared with that of cancer, but some cases have been rapidly fatal. There can be no doubt, he says,



that true fibroma may pass into sarcoma by the exaggeration of its cellular elements.

Further observations are necessary to determine how far Gussierow's statement that sarcoma is the special disease of the body of the uterus is correct. Consulting H. Arnott, upon this point, he tells me that in the few cases he has studied, the sarcoma has *not* been limited to the fundus. In one case of this kind, in which os and cervix alone remained unaffected, the disease was distinctly carcinomatous. On the other hand, the only other case he has seen (shown by the late A. Bruce, and reported upon by W. Fox, Hulke, and Cayley, *Path. Trans.* vol. xviii.) which, although called cancer was clearly sarcoma, did show a nodule in the fundus of the uterus, the os remaining free. But this was a secondary not a primary tumor, the primary disease being a mixed enchondroma of the shoulder.

Professor A. R. Simpson (*Edin. Med. Journ.*, 1876) relates four cases of this disease with valuable commentaries. A point to which he draws attention is that in several instances the disease was attended by inversion of the uterus. Many cases of the so-called "recurrent fibroid," already referred to in the chapter on "non-malignant tumors of the uterus," might be more correctly classed as sarcoma. Although not so rapidly fatal as epithelioma or medullary cancer, sarcoma will fall within the clinical definition of cancer given at the commencement of this chapter. Kunert says (*Arch. für. Gynäkol.*, 1874) that "in fourteen out of thirty cases death ensued within a year after the first appearance." A. R. Simpson says it causes less pain than true cancer. But I do not think this character is constant. In the diffuse sarcoma, the more common condition, operative treatment is scarcely admissible. Where it assumes a polypoid form removal by galvano-cautery is distinctly indicated. But we must be prepared to repeat the operation.

4. The *scirrhus* or *fibrous cancer* is so very rare that West and Paget have not met with it. Rokitsky thus describes it, deducing his description, as he admits, from a very few observations: "On a careful examination one may discover, in the midst of the tissue of the portio-vaginalis, another structure recognizable by the different shade of white of the fibres composing it, and which, though closely packed, intersect each other in every imaginable direction; while the small interstices between them are filled by a transparent matter, of a pale yellowish-red or grayish color. This new structure is infiltrated into the uterine substance without any distinct limits, extending further in one part than in another, and here and there heaped up in greater quantity, thus producing the enlargement of the portio-vaginalis, the uneven nodulated character, and the well-known induration of its substance."

There is a form of *intractable ulceration* of the os and cervix uteri, which most authorities refer to epithelial cancer, but which some regard as of tubercular nature. The tubercular ulcerations are thus described by Robert: "They may be recognized by their excavated base, their grayish appearance, and the presence of caseous matter in the midst of the muco-purulent discharges which come from the interior of the cervix; also by the presence in the cervix of tumors of uncertain size, rounded form, at first firm and with no change of color, afterwards soft, whitish,

yielding to the pressure of the fingers, and giving an indistinct sense of fluctuation. These tumors are formed by the tubercular matter still in a crude state, or in course of softening. These scrofulous ulcerations are almost always accompanied by considerable engorgement of the cervix uteri." On the other hand, under the microscope, the softened matter is found not to consist of the elements of tubercle, but of epithelial cells similar to those of the uterine mucous membrane, while the indurated callous structure which forms the base of the ulcer is composed of a mixture of fibro-plastic and epidermoid materials. Robin says this kind of ulcer is to the uterus what lupus or cancroid ulcers are to the face. Lebert, Hannover, and West support the testimony of Robin.

The *corroding ulcer* of Dr. John Clarke, or *rodent ulcer*.—Opportunities for observing this form of ulcer on the cervix uteri are exceedingly rare. But the observations that have been made justify the conclusion that the disease, when affecting the uterus, is similar to the rodent ulcer of the face or other parts. Its aspect, rate and mode of progress are unlike those of cancer, while neither cancer-cells nor epithelium formations are present in the adjacent tissues. It begins at the mucous membrane covering the os uteri, involving the whole circumference of the os, and utterly destroying both it and the subjacent parts, but there is no thickening, hardness, or deposit of new matter in the vicinity. Unlike cancer, the rodent ulcer may continue for years, without causing any very formidable symptoms.

Lancereaux describes four forms of malignant or quasi-malignant disease of the uterus: epithelioma, carcinoma, sarcoma, and myxoma. The *myxoma* he compares with the hydatidiform degeneration of the chorion. In one case he describes, the body only was affected; the cavity was enlarged, filled with mammillary projections compressed against each other, and implanted in the mucous membrane by a kind of pedicle. They resembled the columnæ carneæ of the heart. Others, smaller and more rounded, were as big as an almond or champignon. They were generally soft, collapsed under pressure of the finger, giving issue to a little thick juice. They were yellowish-white, or blackish from small blood-extravasations. These masses, constituted by rounded cells, fusiform and refracting, separated by an amorphous, hyaline substance, inclosed large and numerous vessels, remarkable for the delicacy of their coats. The subject died of pneumonia.

The frequency with which malignant disease invades the cervix of the uterus in preference to the body seems to be overrated. Cases are really not infrequent in which disease running a malignant course is met with in the body, the cervix remaining quite unaffected. All the forms of malignant disease may begin in the body. I am not in a position to affirm which is the most frequent; but I am inclined to think that the medullary or encephaloid form is the most common. When the body is primarily affected, distress is usually manifested at an earlier stage. Hemorrhages especially are frequent and profuse. Pain is more intense and persistent. The morbid tissue projects into the enlarged cavity in irregular masses, sometimes of polypoid shape, but seldom being fairly pedunculate. They are usually sessile on broad bases. They bleed profusely on the slightest touch. Probably in the case of epitheliomatous



growths there is a stage when the disease is mainly superficial, the substratum in the muscular wall of the uterus being still but slight. Some forms of the "fungosities" or "carcinomas," referred to in the chapter on "Endometritis," are, I have no doubt, of epitheliomatous nature. Indeed, H. Arnott has examined for me some specimens I have scraped off from the living uterus. This temporary superficial limitation is extremely important to recognize, since it offers the prospect, if not of cure, at any rate of temporary relief by surgical treatment.

In these cases the body of the uterus is commonly enlarged to about double the natural size, from its walls being thickened. The patient being under chloroform, the finger will generally pass through the cervix, and thus we can explore the cavity of the uterus by direct touch. The cavity is generally shorter than normal; the walls are apart; they form a rigid hollow globe; the finger feels a soft, pulpy mass lining the whole cavity; portions are easily detached by pressure or scraping with the nail. These brought away look to the naked eye like boiled sago in red currant jelly. Some bleeding invariably attends this examination. Portions of the diseased tissue often are discharged spontaneously, and thus reveal the nature of the affection.

Cancer of the body of the uterus is sometimes secondary, having been derived from primary affection of the ovary. Benporath and Liebmann (*Monatsschr. f. Geburtsk.*, 1865) describe a case of fibroids of the uterus which became affected with cancerous infiltration, proceeding from primary cancer of the vagina.

The lymphatic glands of the pelvis, and especially those which surround the uterus, are frequently the seat of cancerous extension. The invasion proceeds step by step, successively catching the glands situated by the lumbar vertebræ, and following the course of the large vessels, which may be compressed or ulcerated. Sometimes the inguinal glands become cancerous. This is especially the case when the disease has attacked the vagina and vulva. I have described two cases in which the glands in remote parts of the body were also affected. It may, however, have happened that, in these cases, the enlargement and induration were due to irritation from the absorption of the fluid element (the cancerous ichor) of cancer, and not to the actual spread of cancer-cells. It is remarkable that in one of these cases, marked general improvement, with diminution of the glandular swellings, followed upon the attainment of a healthier condition of the local disease.

As to the frequency with which the glands are implicated, the most accurate information is supplied by Henry Arnott (*Path. Trans.*, 1870), who examined 57 cases of cancer in the Middlesex Hospital. There were no secondary growths in 34. The lymphatic glands were involved in 20; in 11 the viscera contained secondary growths; of these 5 in ovaries, 3 in liver, 2 lungs, 1 heart, 1 both breasts, 1 peritoneum.

In 22 the microscopic characters were clearly made out. True cancer 12, epithelioma 8, spindle-cell sarcoma 2. In both cases of spindle-cell sarcoma, the disease appeared elsewhere also, *i. e.*, in pelvic glands. Of the 8 epitheliomata the taint extended in three instances—(1) to ovary and pelvic and lumbar glands; (2) to broad ligament; (3) to lumbar glands. Of the 12 true cancers, 9 spread, pelvic or lumbar

glands being affected in 7, one or both ovaries in 4, liver in 1, heart and lungs in 1.

Why cancer in all its forms so frequently affects the lower segment of the uterus seems to be accounted for by the fact that the neck and mouth of the organ, besides being extremely vascular, are subject to constant motion, and are very largely supplied with lymphatics. It is not surprising, says H. Arnott, that any morbid infiltration tending to rapid cell-growth and early decay should lead to extensive ulceration on a free surface in constant friction against an opposed similar service. Such irritation would be certain in all cases to set up inflammatory processes in their immediate neighborhood, and the irritating secretions of both uterus and vagina, tainted by the new addition, would speedily cause the spread of such malignant destruction in the manner so commonly witnessed. It should also be remembered that it is in the cervix principally that chronic inflammation, hyperplasia, hypertrophy, and all those changes take place which follow upon labor. These changes may be the starting point for malignant cell-growth, and may explain the comparative frequency with which this affects women who have borne children.

The *duration* of cancer is illustrated to a certain extent by the observations of H. Arnott. Dating from the time when the patient first complained of distressing symptoms—generally a flooding—the average duration of 57 cases of all kinds of cancer until the fatal termination, was 77.1 weeks. The average duration of the cases of true cancer was 53.8 weeks, of the cases of epithelioma 82.7 weeks; the two cases of sarcoma lived for a considerable period.

*Cancer* of the uterus is sometimes unfortunately *complicated with pregnancy*. This condition renders the cancerous growth more active; and since the child must traverse the diseased tissues, labor can only be effected at the expense of dangerous or even fatal violence. West collected 74 cases of cancer complicating labor. In 41 death soon followed labor; 33 recovered from the effects of labor; 47 of the children were lost.

Dr. Cook (*Path. Trans.* vol. x.) exhibited some foetal bones found in the cavity of the uterus of a woman who died of cancer. Nine months before she had had an abortion. The uterus was large, firm, and infiltrated with a white granular deposit. The cervix was completely destroyed by an extensive slough. The extrusion of the dead embryo was probably prevented by a cancerous slough in the vagina.

*The Modes in which Cancer Terminates.*—Apart from the faint prospect of an occasional cure from treatment under favorable circumstances, the history of cancer of the uterus is scarcely brightened by a ray of hope. But to faith in the possibility of cure, spontaneous or surgical, the physician, not less than the patient, should nevertheless adhere.

1. *Spontaneous cure* is not absolutely impossible. On rare occasions Nature has accomplished the elimination of the disease. It may be said that there is a continuous attempt to throw off the diseased tissues manifested in the ulceration which occurs in the advanced stages. This ulceration consists really in necrosis or mortification of the superficial strata of the cancerous mass. Dr. Habit relates a case which is not



altogether unique. Cancerous matter united the uterus to the surrounding structures; the vagina was filled with large granulations and fungous growths. Gradually all was replaced by firm cicatrix, and the uterus could no longer be felt. I have seen a case in which a similar process was partially carried out. I saw from time to time a woman who was affected with epithelioma of the uterus invading the roof of the vagina. During two years the disease was progressive, and at the end of that time seemed to be rapidly marching to a fatal end by exhaustion, when a large mass of solid tissue infiltrated with cancerous disease was expelled. Temporary relief was felt. At a later period another mass as large as the first was cast, with renewed temporary improvement, but a large cloaca was left, into which the bladder and rectum opened; and I have no doubt long before this partial elimination took place, the lumbar glands had been invaded, so that the attempt at spontaneous cure came too late.

I am acquainted with another case which may be open to question as to accuracy of diagnosis, but in which there seems to me to be reason to believe that Nature effected a cure. Dr. Newman, of Stamford, was called to deliver a woman in labor at term, delivery being obstructed by an abnormal state of the lower segment of the uterus. The normal tissue of the uterus was replaced by a very unusual hardness, circular, uniform, and infiltrated apparently into the body of the uterus in every direction for more than an inch in extent. The cervix was eaten away at its posterior lip into a deep sulcus; the anterior lip was as hard as the posterior, irregular, with a hard nodulated or granulated feeling to the finger. The os felt to the finger as if it were an opening cut out of a piece of cartilage, perfectly hard and resisting. The deep sulcus, the small narrow orifice, and the thickened anterior lip, throughout denuded of epithelium, granulated, and furnishing watery oozing and sanious fluid, seen through the speculum, left no doubt that the case was one of extensive epithelioma of the cervix and lower part of the uterus. Dr. Ashforth and Mr. Heward carefully examined the case and concurred in Dr. Newman's opinion. The Cæsarian section was performed to remove the child. The mother made a good recovery. When again pregnant, Dr. Newman brought her to town to consult with me as to the course to be pursued. This was five years after the delivery just narrated. I found no hardness or disease of the uterus. We agreed to let the pregnancy take its course. She was delivered with little assistance. She died of conditions quite independent of the uterus. The uterus is figured in my "*Obstetric Operations*."

It may be conjectured that the disease was not cancer, but pelvic cellulitis. But on the other hand, the evidence that it was cancer must be admitted to be strong. I think it probable that the protracted labor caused such an amount of pressure upon the morbid mass as to produce mortification and elimination.

Montgomery gives a case of cure of cauliflower excrescence by pregnancy. Kiwisch observed a kind of gangrenous sequestration in a uterus affected with carcinoma.

Dr. Gallard relates (*Union Médicale*, 1873) a case in which the entire uterus was expelled. The woman was thirty-five years old; the cervix

uteri had been destroyed by cancer. She died twelve days afterwards from peritonitis, produced by the contact of virus. The expelled organ was carefully examined and laid before the Toulouse Medical Society in 1844.

In the breast the course of cancer is more open to observation; and here undoubted cases of spontaneous cure have occurred. Thus Samuel Cooper says (*Surgical Dictionary*), "One young woman whom I attended for a cancerous womb, of which she died, had an aged mother, who had suffered from cancer of each breast, but had latterly been freed from the disease by a sloughing process; an event which is uncommon, but does now and then happen."

A common mode by which cancer kills is by inducing (2) *exhaustion by hemorrhagic and other discharges*; but I believe that other processes conduce to the fatal issue. There is almost always some degree of (3) *blood-poisoning*. And this comes from several sources. The constant necrosis and ulceration of the surface of the diseased mass produce a granulating vascular surface capable of absorbing the foul ichor which bathes it; hence ichorrhæmia. Another source is the intestine. Whenever cancer has proceeded so far that the disease has caught the rectum, obstruction either by direct compression, or by interference with the contractility of the muscular coat, leads to accumulation and partial retention of fecal matter above. This induces retrograde dilatation of the intestinal canal. The arrest of the excrementitious matters in the dilated bowel is followed by decomposition, marked by distressing flatus. Absorption of the products of the decomposed and retained fecal matter takes place. Hence another form of blood-poisoning—copræmia. It is greatly to this that the unhealthy and dirty-sallow aspect of the skin is due.

The cancer-juice is in many cases also absorbed. Evidence of this is seen in the infection of the glands, which arrest probably only a portion of the fluid in its transit towards the general circulation. The significance of the so-called *cancerous cachexia* is not always free from ambiguity. I have seen a woman who had no trace of cancer exhibit the appearance in a marked form. It was the sequela of typhoid. A cachexia hard to distinguish from the cancerous is not infrequent in fibroid polypus attended by partial necrosis of the tumor and retention of blood and necrotic *débris*. It is not due, I believe, to any specific cancerous empoisonment, but to the absorption of the foul necrotic and decomposing *débris* and discharges from the ulcerating surface. I have seen it disappear for a time when the morbid processes on the surface were arrested by treatment, just as the cachexia attending polypus disappears when the polypus is removed.

Added to these sources of blood-degradations, there is of course impaired nutrition to accelerate the sinking from exhaustion.

4. Cancer may also lead to *fatal ileus*, either by pressure or through adhesions, the result of the peritoneal inflammations which so often complicate this disease.

5. Some women die of actual *starvation*. Thus I have known cases of uterine cancer in which the hemorrhage had ceased, and in which, from inability to bear any food, gradual exhaustion carried off the patients.



6. Combined with these causes of exhaustion and blood-poisoning, there is not infrequently such a *retrograde impairment of the urinary apparatus* that the function of the kidney is obstructed, and then urinæmia occurs. The obstruction beginning in the bladder, leads successively to dilatation of the ureters, of the pelvis of the kidney, and to atrophy of its secreting structure; that is, to amyloid degeneration or hydronephrosis. Suppression of urine ensues, and after two or three days coma supervenes. This is the sure forerunner of a fatal issue, usually by convulsions, which is seldom delayed beyond two or three days. But before the coma sets in the patient may show so little suffering beyond what she had long undergone that the imminent danger is hard to realize.

7. Rokitansky describes amongst the effects of cancerous infection *osteomalacia, anæmia, fatty and amyloid degeneration of the liver and spleen* as well as of the kidneys.

8. The circulation is yet exposed to another invasion. The vessels which supply the uterus run through the broad ligaments into the neck of the uterus on either side, just at the very seat of election of cancer. When the disease has extended into the connective tissue around these vessels, *mechanical compression* of the vessels ensues. They become imbedded in a dense mass which quite destroys that freedom of motion and elasticity which characterize the healthy vessels; they are converted into rigid tubes, and these tubes are often contorted, and encroached upon by projections which destroy the evenness of their bores. The veins especially suffer from these changes. The blood moving with difficulty, subject to frequent delays, easily coagulates. Hence *venous thrombosis*, which is often promoted by the entrance into the blood of irritating matter which has the property of causing coagulation. This obstruction to the local circulation is probably a main agent in producing those profuse hemorrhages from the free surface of the disease which are so characteristic of cancer. But it entails other consequences. The first is progressive thrombosis in the veins extending to the internal iliacs, then to the common iliacs, even to the vena cava. The obstruction of the common iliac vein of course leads to obstruction of the external iliac, and the effect of this, concurrently with the necessary clogging of the lymphatics, is seen in *phlegmasia dolens* of the leg. And no doubt the lymphatics are affected like the veins. When it comes to this the end is not far off. As far as I know *phlegmasia dolens* from cancer of the uterus is incurable. The sufferer lingers for a few weeks, perhaps, until life is extinguished by advancing exhaustion, unless another event, 9, *embolism*, occur to precipitate the fatal issue. In some cases I have seen the iliac veins and some inches of the vena cava filled with a dirty, soft, pulpy clot, resembling unhealthy pus. It cannot be a subject of surprise if matter so degraded easily gives rise to detached fragments, which are carried into the heart and thence into the pulmonary arteries. I have seen a lady die of *phlegmasia dolens* consecutive on cancer of the uterus, and embolism of the brain inducing hemiplegia. When, however, *phlegmasia dolens* supervenes on operative proceedings, as amputation of the cervix, it may be due to accidental septicæmic irritation, and this may subside. Of this I have seen several examples.

10. I have seen several *sudden deaths* in women suffering from cancer of the uterus. They have occurred under circumstances which involved an unusual physical exertion or emotion. In one such case, that of a woman in St. Thomas's Hospital, I found conditions which, to my mind, explained the catastrophe. The pelvic organs were matted together by the cancerous disease, the lumbar glands were infiltrated and enlarged, and these, with similar infiltration of the connective tissue, surrounded and fixed the aorta and vena cava nearly as high as the diaphragm. The elasticity of these vessels was thus quite destroyed. The aorta was virtually a rigid tube; and the vein was bulged in in many places by the projecting masses outside. In the left heart were large decolorized fibrin-clots. Under such conditions, the circulation cannot go on well. Under the slightest increase of impulse of the heart, a difficulty would arise in the transmission of the volume of the blood projected by it into the narrowed rigid aorta; this would react upon the feeble heart, cause a struggle and asphyxia. In this particular case there were no emboli or thrombi found in the pulmonary arteries.

In many cases, concurrently or not with the consolidation of the broad ligaments, *peritonitis* supervenes, either being the immediate cause of death, or leading to ulterior trouble by matting together the adjoining organs, and thus impeding them in the execution of their functions.

11. Death, more or less sudden, may be caused by the shock attending *perforation* into the peritoneal cavity. Dr. Priestley showed to the Obstetrical Society (1870) a specimen of a carcinoma of the body of the uterus. Death took place with symptoms of collapse. Perforation had taken place through the anterior wall of the uterus. A similar case occurred at St. George's. I exhibited the specimen to the Obstetrical Society, 1878.

Peritonitis may be excited without perforation of the peritoneum. In this case it is probably caused by the irritation of the cancer growth in the structures immediately invested by the peritoneum. The peritonitis in these cases is of a chronic kind, and conduces to a fatal issue in a remote or secondary manner, as by causing obstruction to the action of the intestines. But sometimes the ulcerative process eats through the peritoneum, and thus sets up inflammation in this membrane, which may be the immediate cause of death.

It may also be excited by a process of local septicæmia and thrombosis, extending along the veins and lymphatics, coming from the morbid mass towards the peritoneal surface of the uterus, or in the broad ligaments.

12. *Secondary tumors* may arise in various parts and interfere with the functions of important organs; for example, such a tumor may obstruct the hepatic duct, and induce jaundice, disorganization of the liver, and thus death; or cancerous deposits, embolic or developed in some other way, may form in the brain or lungs, and so harass these organs as to bring life to a stand.

*Symptoms and Diagnosis.*—I believe the sign that most frequently arrests attention in the first place is *hemorrhage*; and then, when we examine, we find the disease far advanced. In several cases the first thing to suggest the presence of disease has been hemorrhage on sexual intercourse. *Pain* of a marked character, even the stabbing, lancinating



pain described as almost pathognomonic of cancer, is often absent for a long time. So long as the disease is limited to the cervix uteri there is commonly little pain. But when it has extended beyond, and especially in the last stages, pain is often constant and agonizing, destroying rest. Pain and swelling above the groin in the iliac region show extension of the disease to the lymphatic glands and peritonitis. Broca and Cornil have shown that where women have long suffered extreme pain in the thighs, legs, and nates, there has been either an epithelial neoplasm or hypertrophy of the cellular tissue of the neurilemma of the sciatic or crural nerves, and that some nerve-tubules are partially affected, the medullary substance being transformed into granular fat-molecules. The pains have a radiating character, starting as it were from the centre of the disease, and shooting to the sacrum, vertebral column, loins, groins, and thighs.

In the earlier stages, no particular *odor* is perceived, but when ulceration has begun, an odor, penetrating and offensive, is almost certain to be emitted. It is so peculiar that frequently by it the presence of a cancerous patient is made known. It clings tenaciously to the linen and to the examining finger.

In advanced cancer the *aspect* of the patient is often enough to excite a strong suspicion of the nature of the disease. Emaciation is general, but not constant. The skin acquires a dirty straw tint, indicative of a profound alteration in the properties of the blood, and of impaired nutrition. It is true that a very similar tint is often seen in women who have long been draining from polypus or inversion of the uterus. But internal examination at once clears up the diagnosis. The alteration referred to is due to three causes: the influence of the cancerous cachexia, which, as Becquerel has shown, first destroys the globules, and afterwards diminishes the quantity of albumen; to the hemorrhages, which very quickly diminish the globules; and to the serous discharges. Thus the water of the blood increases; the globules and the albumen diminish. The cancerous cachexia is sooner or later followed by *hectic or irritative fever*.

Sooner or later *bladder-distress* almost always comes. The first symptom to arrest attention is often dysuria or partial incontinence of urine, so that examining the bladder we find to our surprise cancer of the uterus. At a later stage the urine may all escape by a fistulous opening into the bladder near the cervix uteri. I had a case in St. Thomas's Hospital, where a valvular cicatrized opening into the bladder near the os uteri was the only opening found, the ordinary meatus urinarius being undiscoverable. Urine escaping from a fistula into the vagina may be retained there by the sphincteric action of the vulva, and thus mixed with blood from the cancerous surface may when voided appear as *hæmaturia*. I have several times known this apparent hæmaturia to be treated as due to bladder or kidney disease.

The distinctive indications are different in the cases where cancer attacks the cervix, and in those where it attacks the body of the uterus.

The diagnosis of cancer of the uterus in the early stages is beset with difficulties. The opportunities of studying the disease at this stage are so rare, that, even when seen, for want of knowledge of its characteristics

it may escape recognition. Thirty years ago there can be no doubt that cases of simple hypertrophy or inflammatory engorgement were not infrequently assumed to be cancer; and credit was asked for having cured them. Duparcque, Lisfranc, Ashwell, and Montgomery certainly fell into this error. And, notwithstanding the more accurate knowledge since extended, mainly through the researches of Téullier and Henry Bennet, of the consequences of inflammation of the cervix uteri, enabling us in most cases to eliminate these conditions, the clinical observer is still liable to mistakes.

Syphilitic condylomata forming on the vaginal-portion may simulate epithelioma. The cancerous disease may be distinguished by its more rapid growth, by its greater tendency to hemorrhage and necrosis, but most surely by the test of treatment. Under cauterization and constitutional treatment the syphilitic disease quickly yields. Not so the cancerous disease.

The characters assumed by the os and cervix uteri during the earlier stages of medullary cancer are less familiar and therefore less clearly defined than those which mark the later stages. At first, whilst strictly localized in the cervix, the cervix is larger than natural, and one or more bumps of the size of half a nut, hard, resisting the finger, quite insensible, may be found on the lips of the os uteri. There is often, also, some puckering of the os. At this stage the mobility of the uterus is not impaired. Through the speculum these bumps show a violet-red tint, quite distinct from the rosy tint of the rest of the cervix. Up to this time, and indeed long after, the patient may still exhibit the outward signs of florid health.

A characteristic form of malignant disease of the os uteri in the earliest stage is due to the extension or spreading of the superficies of the os, whilst the cervix above remains the same. This gives the figure of a *mushroom* to the part. It is true that ordinary hypertrophic elongation of the cervix begins somewhat in a similar way; but the "cancer-mushroom" is distinguished by its more complete resemblance to the mushroom shape, the spreading proceeding all round the os; and by the everted os of hypertrophy presenting a smoother surface. Malgaigne describes the "*Champignons cancéreux*."

Another form not less characteristic might be described as the "*cancer-crater*." A rough jagged edge forms the boundary between the vaginal orifice of the cervix and the cervical cavity, which is scooped out beyond the crater-like orifice. But this character is more often found in ulterior stages.

In forming the diagnosis of cancer, the speculum and sound are commonly useless—except in the very earliest stage—and may be injurious. The tissues are brittle; they often bleed freely even on the slightest touch of the finger; and if the speculum is introduced greater injury is caused, and the effused blood obscures what might otherwise be seen. The finger by the vagina and rectum tells all that is necessary to establish the melancholy diagnosis.

Cancer, when limited to the vaginal-portion, that is, whilst the uterus still retains its mobility, has to be distinguished from the various conditions of inflammation, hypertrophy, and non-malignant tumors of this