The case, of which Fig. 158 is an illustration, affords instructive evidence of some of the effects of large uterine tumors. The case is recorded at length in my Memoir on "Retro-uterine Tumors," in *St. George's Hospital Reports*, 1877. The subject had been married several years without becoming pregnant. At last severe pelvic distress, retention of urine, fever, and peritonitis set in. The pelvis was found blocked by the tumor. It could not be dislodged. Laparotomy was performed and the whole uterus was extirpated. The drawing is an accurate representation of a section. The uterine cavity is seen locked between two tumors. A fœtus of two and a half months' development was found in it. The larger or intra-pelvic tumor had fallen into necrosis. The woman seemed relieved by the operation for a time, but sank from exhaustion in thirty-six hours. The preparation is in St. George's Museum; and it is a matter of interest to note that in the same museum is a preparation nearly like it, excepting that the uterus was not pregnant.

It is right to repeat that the justification for attempting enucleation, avulsion, or other mode of removing large fibroid tumors will rest upon—1. Uncontrollable hemorrhages endangering life; 2. Signs of sloughing or decomposition of the tumor, with present or threatening peritonitis or pyæmia; 3. Dangerous pressure upon the bladder and rectum; 4. Such great size as to cause dangerous pressure upon the abdominal and thoracic viscera. Life must be unmistakably threatened.

The same conditions threatening life, and removal by the processes above enumerated being precluded, may justify the last resource, that of laparotomy and removal of the uterus.

The case is analogous to dystocia. If we cannot effect delivery through the pelvis, we resort to laparotomy. And this must be the rule of action in dealing with uterine fibroids, *assuming always that extirpation is necessary*.

The time has not yet come for forming a confident opinion upon the practice of laparotomy for the removal of uterine fibroids either alone or with the uterus. At present there is little ground for enthusiastic advocacy of the practice. The case may best be summed up by stating that the question is *adhuc sub judice*. We must for a while be content with the divided opinions expressed in the Academy of Medicine on the occasion of a report presented by Demarquay on Memoirs by Koeberlé, who advocates the proceeding, and by Boinet, who condemns it. Boinet showed that the operation had for the most part been performed accidentally in cases mistaken for enlarged ovary; that it could not be defended on the same grounds as ovariotomy; that it should always be rejected when the tumor was not pedunculated, and especially when it involves the entire or partial removal of the uterus. Demarquay agreed with Boinet.

On the other hand, Richet cautioned the Academy against pronouncing any summary condemnation of an operation which at present is dreaded as ovariotomy once was.

Thomas (1874) summed up twelve recent cases observed in America; of these eleven died. Pozzi tabulates seventy-five cases, not counted by Péan; of these forty-eight died. The causes of death were: hemorrhage, peritonitis, shock, fibrin-concretion in the heart, septicæmia, exhaustion.

I have seen death from all these causes. Another cause of death is intestinal obstruction (Broca and Dolbeau).

If decomposition of a tumor have begun, and constitutional symptoms from absorption appear, a decided attempt at least should be made to bring away the tumor. The patient being under chloroform, the hand *in utero* may effect detachment unaided, or scissors or scrapers may be used to divide any bands or connections.

In conclusion it may be stated that the question will be decided, like ovariotomy, by experience; but to acquire that experience justifiably, extreme caution, judgment, and conscientiousness, as well as surgical skill are required.

CHAPTER XXV.

POLYPUS UTERI.

DEFINITION; FORMS OF: FIBROID OR MYOMA; GLANDULAR OR MUCOUS; HYPERTROPHIC; VASCULAR; PLACENTAL; FIBRINOUS; HISTORY OF FIBROID; FIBRO-CYSTIC VARIETY; SYMPTOMS; TERMINATIONS; INTRA-UTERINE POLYPI; DIAGNOSIS; TREATMENT; SLOW STRANGULATION, DANGERS OF; TORSION, CRUSHING, AND EXCISION BY SCISSORS; REMOVAL BY POLYTOME, ÉCRASEUR, GALVANIC WIRE-CAUTERY.

Definition.—Under the name of polypus are included all tumors, stalked or sessile, which hang from the inner wall of the uterus or vagina. It is, however, convenient to exclude cancerous growths and the cauliflower excrescence. A polypus of the uterus may be defined as a uterine tumor in process of extrusion from the mucous surface. This chapter then is the clinical continuation or completement of the preceding chapter, which treats of non-malignant tumors of the uterus.

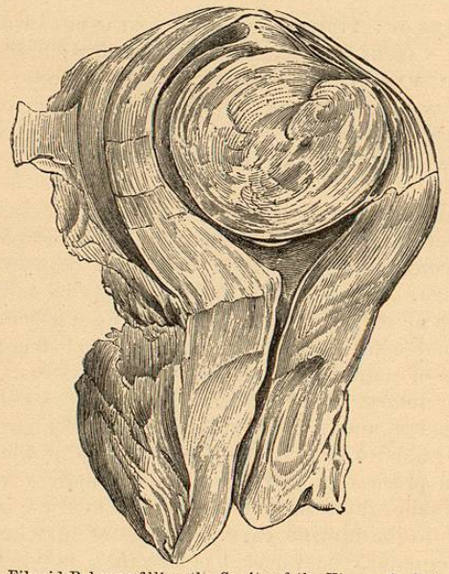
In the greater number of cases of clinical interest, a polypus is nothing more than a tumor in one of its ulterior stages. We have seen that the fibroid tumor is liable to be extruded from the wall of the uterus into the cavity. In this process of extrusion, a stage arrives when the tumor becomes first sessile, then pendunculated. When the main bulk of a tumor projects into the uterine cavity, its seat of attachment being narrower than its equator, the tumor has become a polypus. This definition, especially true of fibroid polypus, is generally true of the other forms. But Cruveilhier's distinction is useful. He divides polypi into —1. *Stalked.* 2. *Sessile.* In the stalked kind the polypus is nearly or quite distinct from the proper tissue of the uterus. The stalk consists mainly of the stretched mucous membrane, connective tissue, and perhaps a little muscular fibre. This is most frequently the case with the hard tumors. In the sessile polypus we are more likely to find a broad continuity of muscular tissue between tumor and uterine wall.

Polypi, like ordinary tumors, differ in their histological structure, and in their situation and other clinical characters. The source of a polypus will commonly be an indication of its anatomical character. This is the consequence of the law that like tissues produce like outgrowths. For example, the muscular wall of the body of the uterus produces the fibroid or myomatous tumor or polypus. The cavity of the cervix and the os uteri produce mucous, glandular, or cystic polypi.

The varieties of polypi are then, *a*. The fibroid or myoma; *b*. The glandular or mucous; *c*. The hypertrophic polypus of the cervix; *d*. The vascular; *e*. The placental; *f*. The fibrinous.

a. The form which most frequently comes under clinical notice is the *fibroid or myoma*. The structure and history of this form are described in the preceding chapter on tumors of the uterus. It is only necessary here to trace those clinical features which are peculiar to the polypoid character. It mostly springs from some part of the wall of the body of the uterus, generally from the fundus. Projecting into the cavity of the uterus and preserving organic connection with this organ, it acts in two ways—1st, it irritates as a foreign body; 2d, it stimulates uterine growth like an ovum. It is a parasitic body. It is upon these two conditions

Fig. 159.



Fibroid Polypus filling the Cavity of the Uterus (R. B.).
In this case the wall of the uterus is much thinner where the tumor is attached.
Ad Nat., Coll. of Surgeons, No. 2666.)

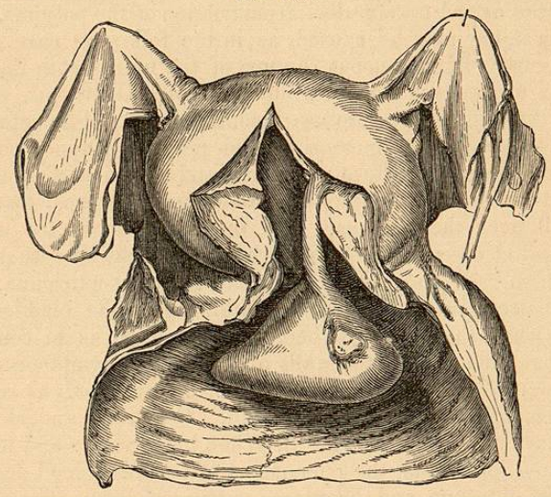
that most of the accidents attending polypus depend. The uterus struggles to cast out the unwelcome guest. Hence spasmodic pains, which are the exponent of the uterine contractions. Hemorrhage and leucorrhœal discharges occur as the exponent of the increased vascularity and development of the uterus.

Just as we have fibro-cystic tumors of the uterus, so we may have fibro-cystic polypi. The softer myomatous tumor which is more continuous with the proper muscular wall of the uterus may also become polypoid. But this is comparatively rare.

Fig. 159 is a good illustration of a fibroid intra-uterine polypus still sessile.

Fig. 160 is a good illustration of a stalked polypus.

Fig. 160.



Fibroid Polypus which has been Extruded from the Cavity of the Uterus, the triangular shape o which it retains (R. B.).

It is attached by a long stalk, the root of which is traced into the wall of the uterus. (Half-size, College of Surgeons.)

Sometimes instead of forming a pedicle, the tumor is cast out entire.

In the process of extrusion a pedicle is formed which is sometimes capable of elongation, permitting the tumor to descend lower and lower. The thin layer of proper uterine tissue which forms the shell stretches out, and through the stalk, the vascular connection with the uterus is maintained; at the same time the connection is further aided by the investing mucous membrane. At other times the connection is more intimate; the fibroid structure of the tumor is extended into the substance of the uterus, forming a dense, short, unyielding stalk. Under uterine action, since the tumors will not separate, and the stalk will not lengthen, the uterus itself is dragged down, producing partial or complete procidentia of tumor, and vagina, and uterus, and sometimes even inversion.

We may distinguish three stages in the history of polypi. 1, The tumor in process of pedunculation is still retained in the proper cavity of the uterus, or is distending the cervix; 2, the tumor, pedunculated, has escaped from the uterus, and is accommodated in the vagina; 3, in some cases, the stalk much lengthened, the polypus protrudes beyond the vulva.

The symptoms differ in the cases of polypus still retained within the

cavity of the womb, and of polypus which has escaped through the os uteri into the vagina. When the tumor is locked up in the uterine cavity, we may have to depend upon the subjective symptoms alone. The general symptoms are these: 1. Hemorrhage, generally at first in the form of menorrhagia, afterwards liable to recur at any time. This is very common, but not constant. 2. Leucorrhœa of a mucous, purulent, or serous character; at times tinged with blood, and very offensive, owing to the discharges being retained in the vagina and decomposing there. 3. Bearing-down, or expulsive pains. 4. Abrasion, ulceration, bleeding of the os and cervix uteri, from friction of the polypus. 5. Even more serious injury may be caused, as in the following case. Larcher describes a case[1] of spontaneous rupture of the uterus with intra-uterine polypus. A woman was admitted into the Hôtel Dieu, with pain in the abdomen. After four days profuse bleeding set in. She refused examination. Two days later meteorism and peritonitis appeared, and she died. Section revealed diffuse peritonitis and adhesion of all the organs of the small pelvis. A polypus was found in the uterus, seated in the anterior wall near the isthmus. The opposite side of the uterus was ulcerated, and at one spot torn through, communicating with the cavity of the abdomen. 6. They may cause metritis, and septicæmia. 7. Perhaps some distress in micturition or irritability of the bladder; and in some cases, when the tumor has been very large, so as to compress the bladder and rectum against the walls of the pelvis, symptoms like those of retroversion of the gravid womb have been developed, as retention of urine, urinæmia, and intense pelvic pain. Gangrene and sloughing of the vagina have even been known. 8. When hemorrhage and leucorrhœa have continued some time, the phenomena of anæmia, blood degradation, impairment of digestion, and disordered nutrition follow. The aspect may become sallow; the patient emaciated; and the discharges offensive. These, together with pain, constitute a series of symptoms that have often given rise to the conclusion that the disease was cancer. 9. There will commonly be enlargement of the body of the uterus, and expulsive pains of a spasmodic character, constituting uterine colic. 10. Another not uncommon symptom is vomiting. This appears to be due to distension of the uterine fibre.

When the polypus has escaped from the uterus into the vagina some of the foregoing symptoms are mitigated or cease. The pain is commonly much diminished.

What has been said of the *vascularity* of fibroid tumors and of *the source of the hemorrhage*, applies to the fibroid polypus. This is rarely very vascular in its substance. But the investing mucous membrane is commonly very vascular. A network, chiefly of veins, is formed in it, from which blood easily oozes in profusion at the menstrual periods, and under injury to the surface.

Occasionally, however, vessels of considerable size have been seen penetrating the substance of fibroid polypi. The growth of fibroid polypi, like that of fibroids still imbedded in the uterine wall, is stimulated by the ovarian or menstrual nisus, and still more actively by

[1] Arch. Gén. de Méd., Nov. 1867.

pregnancy, obeying the same impulse as that which governs the cognate muscular tissue. In like manner they are disposed to undergo a similar retrogression or decline when pregnancy has passed, and even atrophy or calcareous degeneration when the period of menstrual life has ended. Hence the bony or stony polypi of Gerdy (*Des Polypes, et de leur Traitement: Paris*, 1833).

But this post-climacteric retrogression is not constant. The tumors may even continue to grow.

As to the consequences of polypi, much variety is observed. Velpeau (*Journ. de Méd. et de Chir. Prat.*, 1859) says they are sometimes harmless, and that the consequences are not in relation with their volume. Some disappear spontaneously. They may be found loose, or may drop off unperceived. But commonly repeated hemorrhages induce such a degree of anæmia, that even death follows if the tumor be not removed. And this danger is greatly increased if pregnancy supervene. (See fatal cases in Gooch, p. 145.) Dr. Cockle relates (*Med. Times and Gaz.*, 1863) a case of a large, pedunculated, fibrous polypus attached near the fundus uteri, distending the uterus and vagina, and giving rise to frequent bleedings and offensive discharges. The patient died after symptoms of peritonitis from perforation. The ovarian extremity of the right Fallopian tube was found distended by the discharge, some of which had escaped into the abdominal cavity. Many patients have died exhausted by bleeding caused by an intra-uterine polypus not suspected during life. In a memoir on "Uterine Polypus" (*Lancet*, 1854), I narrated a very instructive case. The patient was twenty-six years of age; she began to menstruate at the age of fourteen, and this function was performed very regularly until her marriage, eight months ago. From that time she had suffered almost perpetual hemorrhage; the flooding was so profuse that it was thought she had miscarried. She had strong bearing-down, expulsive efforts. The patient died the same night in convulsions, evidently from loss of blood. There was no inflammation. The os uteri was healthy, but flaccid; it was filled with a fresh clot. There was also blood in the cavity of the uterus. The walls of the uterus were dense, pale, somewhat thicker than natural, and the whole size of the organ somewhat larger than the normal unimpregnated womb. Attached to the inner surface near the fundus, and altogether inclosed within the cavity of the uterus, was a tumor of the size of a small walnut. The mucous membrane of the uterus was stretched over it. It was connected by a broad basis to the uterus, but would have admitted of isolation by ligature. The apex, or most projecting part, had undergone partial disintegration; it was a little broken up, softened, and had evidently quite recently been the source of hemorrhage. The tumor was fibroid. The woman had probably aborted as well.

When pregnancy supervenes, the presence of the polypus is a source of serious danger. The tumor partakes of the general development, and increased vascularity of the uterine wall. In this state injury inflicted upon it is more severe in its consequences; inflammation and necrosis, for example, are more liable to follow. To anticipate the spread of morbid processes from the tumor to the uterus, it is best to remove the tumor by the wire écraseur as soon as its presence is discovered after the labor.

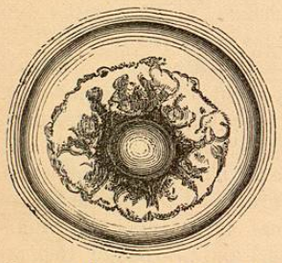
The history of this complication is pursued more fully in my *Obstetric Operations*.

It is desirable to bear in mind that polypus may be a cause of abortion. Generally, however, polypi prevent pregnancy. A curious case occurred to the writer of a uterus removed in the dissecting room in which a polypus the size of a filbert grew at the orifice of each Fallopian tube, both being completely closed. In another case the tumor had been driven outside the vulva, closing the entrance to the vagina. In the case of polypus filling the vagina, sterility almost necessarily follows.

b. The *glandular* or *mucous* polypus generally grows from the os uteri, varying in size from a filbert to a walnut. It is smooth and vascular, and contains in some instances a curdy matter, or yellowish viscid fluid. Herbiniaux described this form. It is not uncommon. There is a remarkable example in the Middlesex Museum of a cyst which appears to have been produced in this way. They generally grow from a broad basis, rarely becoming stalked.

Klob and Paget thus describe the production of glandular polypi. The mucous membrane of the cervix is denser than that of body of the uterus. 1st. The glands degenerate into vesicles situated either in the borders of a single transverse fold, or when developed parallel on several such folds, arranged into rows. Or 2dly. The degenerated glands are formed chiefly along the longitudinal folds, like a string of beads. One of these small cysts then becomes more prominent, forming a round protuberance, an excrescence which contains the gland degenerated into a cyst. Dr. Andrew Clark, when my colleague at the London Hospital, gave me a similar description of a specimen I submitted to him.

Fig. 161.



Mucous or Glandular Cervical Polypus, causing Abrasion or Ulceration in its neighborhood (R. B.). (Ad Nat.)

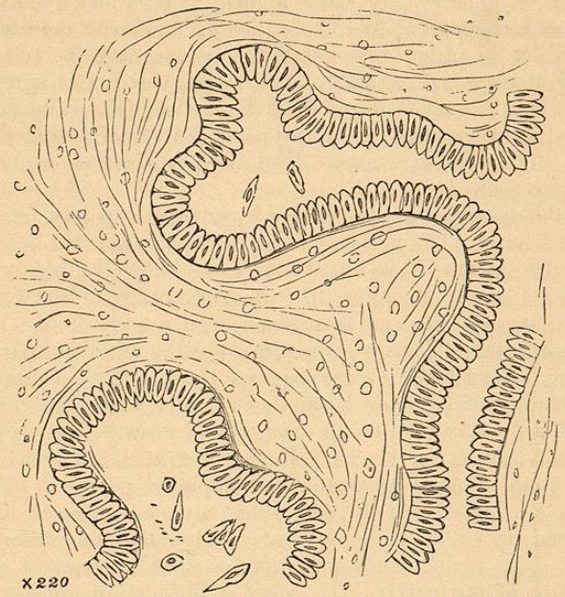
An illustration of one form of mucous polypus is seen in Fig. 161. The patient was subject to profuse hemorrhages and leucorrhœa.

They often attend chronic metritis, especially of the cervical portion. They induce great hyperæmia, and give rise to profuse bleedings. Being small, soft, and easily retreating within the os uteri, they readily escape detection by touch. The speculum is sometimes necessary to reveal them. They project as stalked little tumors on the red, abraded margin of the os uteri, but are occasionally seen higher up the cervical canal. They range in size from a quarter of an inch to half an inch long, and sometimes they exceed this. On pressure, as in trying to seize them with a forceps, they easily break up. They are the result of a morbid condition of the cervix. They contain a viscid fluid, and thus may be identified with their glandular origin. But some are really papillary outgrowths. These latter are especially vascular.

The so-called "channelled" polypus of Oldham appears to be a variety of the glandular polypus, although the fibro-cystic tumor may put on the appearance of channels.

Fig. 162, for which I am indebted to Henry Arnott, shows the histological characters of these outgrowths. It exhibits the proliferating connective tissue with imbedded, winding gland-ducts, lined with columnar epithelium.

Fig. 162.



Section of a "Channelled" Glandular Polypus, slightly Diagrammatic. (H. Arnott.)

c. The *hypertrophic polypus* of the cervix uteri. Although most polypi may in some respects be regarded as hypertrophies of ordinary structures, there is one form to which the name seems to me to be more especially applicable. In a memoir[1] on the "hypertrophic polypus," I have described as frequent the outgrowth of dense fibrous polypi on the edge of the os uteri in cases of prolapsus. So frequent is this coincidence that one is naturally led to conjecture either that a common cause produces both, or that one entails the other. It can hardly be that polypus is the cause of hypertrophy of the cervix, for in the majority of cases of hypertrophy there is no polypus. The truth appears to be that that excessive growth which results in hypertrophy, sometimes produces polypus as well.

These polypi are generally small, sometimes not larger than a pea, sometimes they are as large as a cherry; they may be round, but are occasionally elongated, cylindrical, but more or less irregular in form. (See Fig. 119, p. 550.) They easily escape detection by the finger; hence it often occurs that their existence is first revealed by the speculum. They generally begin to form just inside the ring of the os uteri, and growing first inwards, the hypertrophied os uteri conceals them and pro-

[1] St. Thomas's Hospital Reports, 1872.

tects them from the touch. When they have existed some little time, have increased in size, and have frequently caused hemorrhage, they sometimes descend below the edge of the os uteri, and may then be felt like a hard pea by the finger. But before this stage they can often be seen through the speculum, especially through a good bivalve which makes the os gape widely when applied. They are commonly single, but it is not infrequent to find two or three; and some show a disposition to subdivision or rather to lobulation. They entail the common consequence of other polypi, namely, hemorrhage. It is this symptom which mainly leads to examination and their detection. Generally their removal is followed by diminution or cessation of the hemorrhage; but here the benefit of the operation ceases. The distress which properly belongs to hypertrophy continues.

The pathological history of these "hypertrophic polypi" may, I think, be told as follows: The first condition of their existence is hypertrophy of the cervix uteri. This hypertrophy we know frequently pursues a very uniform course affecting the whole structure of the cervix alike; but sometimes one lip, and sometimes even a part of one lip, is more especially affected. Thus we sometimes see the anterior or the posterior lip shooting out an inch or more beyond the other. At other times the os uteri being lobulated or fissured, as is seen after labor, one lobe or portion of a lip may take on an exaggerated growth, and project beyond the level of the rest of the os. In such a case, if studied by the light of observation of more advanced or completed polypoid formation, we may see the origin of the hypertrophic polypus. A small lobe more or less marked out on the os by a fissure or depression on either side continues to grow under the same stimulus that determines the general hypertrophy of the cervix. It grows a little more quickly; then, its base being compressed by the firm structure of the os on either side of it, is squeezed and elongated until it assumes the characteristic polypoid shape. All this, I think, I have been able to trace in the successive stages in different cases.

The structure of these hypertrophic polypi of the cervix uteri entirely accords with this theory of their formation. It is identical with that of the hypertrophied cervix from which the polypi spring. The mucous membrane with which they are covered presents exactly the same elements as the mucous membrane of the corresponding part of the cervix or os uteri. If they are attached within the cervix, we find columnar and ciliated epithelium-cells. If they are attached to the outer edge of the os, then we find chiefly large squamous epithelium-cells. The interior in both cases is composed of bands of smooth fibres like those of the unimpregnated uterus.

I removed by galvano-cautery a hypertrophied lip of an os uteri, and received from Dr. John Harley the following report of its constitution: "It contained one or two little cysts, natural follicles enlarged, full of glairy mucus consisting of normal mucous corpuscles. The mass was composed of the usual uterine structures, that is, interlacing bands of smoother fibres." These facts I had often observed myself, but was glad to find them verified by my colleague.

d. The *vascular polypus* takes its rise from a dilatation or varicosity

of the vessels running under the mucous membrane. All these three forms are found in the cervix or os uteri. Amongst conditions simulating polypus may be mentioned a mushroom-like hypertrophy of the os uteri. It is referred to by Dance, Bérard, Cruveilhier, Mayer, Meissner, Malgaigne, and Montgomery. Malignant growths of the os also often resemble polypus by their form.

e. In addition to the above recognized forms, Rokitansky, Kiwisch, Scanzoni, and C. Braun have described other varieties. C. Braun (1851) describes the *placental polypus*. This results from the remains of the placenta consisting of hypertrophied decidua, which, projecting into the uterine cavity, forms a polypoid mass. Braun relates five cases in which violent hemorrhage broke out some time after delivery. Polypi of the kind described were found. In four cases they were extracted with the finger; in one the polypus separated spontaneously. The *fongosités intra-utérines* of Nonat, according to Stadtfeld, of Copenhagen (*Dubl. Q. Journ. of Med.*, 1863), are placental remains. Such a case was sent to the writer by Dr. Woodman. Arthur Farre (*Todd's Clycop. of Anat.*) says he has satisfied himself of the correctness of Heschl's opinion, which agrees with the above, upon the formation of the placental polypus.

Malgaigne describes "*multiform polypi*" containing hair. These must be dermoid cysts.

f. Kiwisch describes *fibrinous polypi*. This author says when menstruation has been retarded six weeks, fibrinous polypi may arise from long persistent hemorrhage, a kind of apoplexy of the uterus, a large coagulum forming the upper part consisting mostly of fibrine and adhering by a stalk to the uterine wall, whilst the lower part consists of red soft coagulum having a coat of firm fibrin. These polypi always occasion profuse metrorrhagia. Scanzoni, however, does not admit this view. He contends that these are cases of abortion, and would therefore fall under the class of "placental polypi." An ovum after fixing itself in the mucous membrane of the uterus, and after being quite clothed with a decidua reflexa, is soon driven down by uterine contraction into the cervical canal, its attachments lengthening into a stalk by the stretching and growth of their tissues. The embryo escapes, whilst a portion of the membranes or stalk remains, and by accretions of fibrin-coagula forms the basis of fibrinous polypus. McClintock gives an illustration of a dense coagulum simulating a fibrinous polypus.

I have little doubt as to the general correctness of Scanzoni's criticism. There is a preparation in St. George's Museum, described by Dr. Ogle (*Pathol. Trans.*, vol. xi.) as a "large mass within the uterus, supposed to be a fibrous tumor, but which proved to be formed by retained placenta and fœtal membranes. A woman died after an operation for femoral hernia. On removing the uterus a quantity of dark semi-coagulated blood, along with some shreddy tough material, was found protruding from its orifice. A firm substance was found filling the cavity of the uterus. Excepting at its upper part, where it was, as it were, continuous with the muscular structure of the uterus, its whole extent was free. It consisted of placenta. No fœtal growth was discovered. But it was evident that the growth had been retained a long time.

The diagnosis of a polypus which has emerged from the cavity of the uterus is usually not difficult. The sources of fallacy are chiefly prolapsus of the uterus, and inversion. Confusion is only possible when the tumor resembles in size that of the uterus in one or other of these states. A tumor not bigger than a walnut can hardly be mistaken for the uterus. A tumor bigger than an orange is not likely to be the uterus. But tumors ranging between these sizes may give rise to error. The great landmark is the os uteri. In prolapsus this can always be found at the lowest part of the tumor. By passing the sound through the os we shall rarely fail to take exact measure of the uterus. Again, the sensation conveyed to the touch by feeling the body of the uterus through its coat of inverted vagina which can be made to glide over the solid mass within, is very different from a solid polypus felt directly without any intervening coat. The uterus, moreover, is sensitive to compression, whilst a polypus is not.

Complete inversion is distinguished by—1, the absence of an os uteri at the lowest part; 2, by the neck of the tumor being continuous with the roof of the vagina which is directly reflected off from it; 3, by determining the absence of the body of the uterus from its normal position by the combined rectal and abdominal touch, and the other diagnostic manœuvres described and illustrated in the chapter on "Inversion."

Partial inversion, namely, where the fundus of the uterus only comes through the os uteri, is more likely to lead to error. In this case, as in polypus, there is a rounded tumor encircled by a ring, permitting a sound or the finger to pass up between. See Figs. 144, 145, page 621. The following tests will commonly distinguish the partial inversion. The sound will not run more than an inch, perhaps less, beyond the margin of the encircling ring, whereas in the case of polypus it will generally run at one part or another at least two and a half inches. And the manœuvres which define complete inversion are almost equally conclusive in the case of partial inversion. For example, the cup or funnel-like depression of the fundus uteri may be felt through the abdominal wall.

Polypi which have been detected at one time by touch and even by sight, may escape observation at another. It is possible that the polypi may have become detached and expelled. But more often this intermittent appearance is due to the greater relaxation of the cervix, and some contractile action of the uterus attending hemorrhage or menstruation. Under these conditions the tumor projects through the open os; and retreats when these conditions subside. Commonly polypi are detected, and their size and attachment best made out by the touch. But now and then glandular polypi are discovered by the speculum which had escaped detection by the finger. A good bivalve speculum, by parting the lips of the os uteri, will often enable the sight to explore further than the touch.

An intra-uterine polypus may escape detection unless the cervix uteri be sufficiently dilated to admit the finger. But if the rule I have ventured to lay down, namely, that in all cases of obstinate uterine hemorrhage, the cavity of the uterus should be explored by dilating the cervix, be observed, we shall always be able to determine the presence or absence of a polypus. And whether the hemorrhage be due to a fibroid polypus, to malignant disease, endometritis or other cause, not only is accurate diagnosis arrived at, but the way is opened for the most efficient treatment.

It is curious to notice how deceptive is the sensation communicated to the touch by some fibroid polypi. Even under palpation after removal they may give the impression of fluctuation, as if they were cystic and contained fluid, whereas on section they are found quite homogeneous.

A very important practical rule is, in a case of presumed polypus, to trace up the tumor to its attachment before operating. This can generally be accomplished by finger or sound. If the finger can find room to pass along the tumor to its insertion, then by combined abdominal palpation we may get the body of the uterus above the tumor between the two hands. The information so obtained is unequivocal. Where the finger cannot reach, the sound will answer nearly as well. We feel the fundus of the uterus supported on the sound through the abdominal wall, whilst a finger in the vagina distinguishes the tumor.

Were these methods of diagnosis rigorously carried out, error would be almost impossible. But polypus is so common, and inversion so rare, that the mind is taken possession of by the more common event. The rarer event not being contemplated, we readily accept as conclusive in favor of polypus evidence which is really insufficient.

One form of the placental polypus may easily be mistaken for an ordinary polypus. Thus I have been called to cases where the patient was said to be bleeding from polypus, and I have found a mass more or less firm partly projecting from the os uteri, and attached to the inner surface of the body of the uterus. By dilating the cervix by laminaria-tents, these masses were sometimes removed by the finger and sometimes by the wire-écraseur. The structure of the masses removed was found to be the placenta of abortion.

The Treatment.—A polypus, being a tumor in process of spontaneous expulsion, seems to invite surgical assistance. We are simply called upon to complete a cure where Nature points the way. The treatment is generally successful. It constitutes one of the most satisfactory applications of surgical skill. The principal methods resolve themselves into—1, removal by strangulation; 2, by torsion; 3, by various methods of excision.

Palliative or temporizing measures are rarely indicated. If hemorrhages, leucorrhœa, forcing down, or other urgent local or general distress exist, the indication to remove the tumor is generally imperative. Even if a polypus give rise to no trouble, it is the wiser course to remove it, since it may at any unexpected time be the occasion of mischief.

1. It is convenient in the first place to dispose of *strangulation*. Experience of its dangers, and the perfection to which the proceedings for effecting immediate removal of polypi have been brought, has fairly exploded this method.

The ligature was for a long time applied so as to effect strangulation and slow detachment by sloughing. Levret contrived an instrument consisting of two silver canulæ curved, and so united by a joint that they are shaped like a pair of forceps. A ligature is passed through the tubes,