

the opposite wall of the vagina. To the sight these seem to be only a congeries of fibro-cellular tissue and blood-vessels. Polypi growing from the os tinæ are generally attached to one lip of it. I am not able to say upon which one they are most frequently found. They often prevent conception, but not always, for our medical literature contains numerous examples of labour complicated with, or obstructed by, very large polypi, which could hardly have grown during the period of gestation.

Their removal is easy enough. They may be cut off with scissors, or removed by the *écraseur*. I know that fatal hamorrhage has followed the use of scissors, but it was before the discovery of the styptic properties of the perchloride of iron by Pravaz. This was indeed a boon to surgery, and Deleau* has rendered a great service in vulgarizing its use.

But, unfortunately, it is a remedy of uncertain properties. It often contains free acid, and then it irritates the mucous surface of the vagina. So uncertain is this preparation in New York, that the profession there have almost entirely abandoned its use, substituting for it the solution of the persulphate of iron (as made by Dr. Squibb, of New York), which seems to be quite as efficient and is not so liable to the same objections. In Paris I could not get the persulphate of iron, and I was obliged to return to the use of the perchloride as a styptic. Mr. Swann, chemist, Rue Castiglione, procured for me specimens of the perchloride which purported to be neutral, but

* "Traité Pratique sur les Applications du Perchlorure de Fer en Médecine." Par M. T. Deleau, Docteur en Médecine, &c. Paris: Adrian Delahaye. 1860.

they produced very deleterious effects on the vaginal epithelium, and at last he got some of Deleau's, and its effects were as desired, viz. styptic and unirritating.

We will suppose a polypus growing from the posterior lip of the os tinæ, with a pedicle half an inch, more or less, in diameter (fig. 22). If it is to



FIG. 22.

be removed by scissors, first prepare the styptic by mixing one part of the solution of the perchloride of iron, with three or four of distilled water; then saturate pledgets of lint in it, or, what is better, take some fine cotton wool, wet it thoroughly in plain water, squeeze all the water out, and then wet it in the mixture, and squeeze it nearly dry.

When all is ready, place the patient in the semi-prone position, apply the speculum, lay hold of the tumour with forceps, or a vulsellum, draw it gently forwards, and cut it off at one stroke with suitable

scissors. Sponge the cut surface a moment, and quickly apply the lint or cotton previously prepared, and press it firmly in place with a sponge probang (fig. 23). The firm pressure of one or two sponge probangs on the styptic lint or cotton almost instantly checks the bleeding. Wait a little to be sure of this, and then put a tampon of dry cotton over all, merely to secure the dressing proper *in situ*. The patient is put to bed,

the recumbent position is enjoined for a day or two, and the bladder may or may not be emptied by the catheter.

On the next day the dry cotton is to be removed, taking care not to disturb the iron dressing in contact with the cut surface. This adheres closely to it, and is not, as a general rule, to be removed till it is loosened and thrown off by the suppurating process, which takes two, three, or even four days.

But, when the dry cotton is removed on the day after the operation, its place is to be supplied by a bit of cotton saturated with Price's glycerine, which is to be renewed daily, till the cut surface be healed. For this purpose take some fine cotton, as much as can be easily held in the hollow of the hand, immerse it in tepid water, and squeeze it gently under the water till it becomes perfectly wet; then press all the water out of it, and saturate it with Price's glycerine. To do this, lay the moistened cotton in the palm of the left hand, spread it out circularly for an inch and a half in diameter, more or less as may be needed, scooping it out in the centre—then drop half a teaspoonful of glycerine on it thus held, and rub it into the cotton with the point of the finger, then pour on a little more gly-



FIG. 23.

cerine, and rub it in, and so continue till the cotton becomes saturated. When finished, the cotton should feel soft and pulpy, should be about an inch and a half in diameter, and about half an inch thick.

This dressing is an expensive one, for it will hold from one to three drachms of glycerine; but I do not think there is any substitute for it, and its effects are such that I consider it cheap in the end.

This glycerole cotton is thus applied daily till the first dressing is removed, and then it may be continued for a few days longer, till the whole surface be healed.

Glycerine is now fixed in professional estimation as a most valuable addendum to the domain of surgery; and to the philosophic and practical mind of Demarquay* are we indebted for a complete treatise on the subject, setting forth its properties and qualities. Its use in uterine surgery occurred to me some seven or eight years ago, in this way:—To a case of granular engorgement I wished to apply some caustic or other; but, whatever it was, I could not at once find it. Being very much hurried, I looked around for some substitute. And it occurred to me to apply a bit of cotton wet with glycerine, merely to protect the os uteri from contact with the opposite surface of the vagina, which was also quite granular. I fully intended to use the caustic on the next day. But, when my patient returned, she saluted me with, "Well! doctor, what effect did you intend the treatment of yesterday to produce?" Seeing that there was evidently something out of the way, I was quite at

* "De la Glycerine," &c. Par M. Demarquay. Paris. 1863.

a loss for a satisfactory reply ; and she continued, " You ought to have told me all about it, for, when I got home, my linen was so wet that I had to change it, and the water streamed from me all night in such a way that I have had to wear napkins to protect myself." This was all news to me, and, on examination, I found the pledget of cotton still wet, lying just as it was placed on the cervix uteri, which, together with the vagina, had a clean, healthy, and greatly improved appearance, compared with what it had the day before. I applied another similar dressing, to see if it would produce the same effect. It did, and these dressings were repeated till the case was entirely cured : since which time I have used glycerine in this way in all my surgical operations on the neck of the womb, and in other cases of organic lesion.

The effect of glycerine thus used is very remarkable. It has great affinity for water. A bit of cotton saturated with glycerine, and exposed to the air, will retain moisture for weeks. When applied to the neck of the womb as above directed, it seems to set up a capillary drainage by osmosis, producing a copious watery discharge, depleting the tissues with which it lies in contact, and giving them a dry, clean, and healthy appearance. When such a dressing is applied to a pyogenic surface on the cervix uteri, for a few hours, and then removed, the cut or sore will be as clear of pus as if it were just washed and wiped dry.

Much has been written on the diagnosis of polypous tumours. I do not intend to open the subject here, but I would only say that the Gordian knot is easily cut, if my method of exploration be adopted ; for, with the patient on the side (or knees, if necessary), with my speculum everything is brought so plainly

into view that there is no possibility of making a mistake.

Dr. Graily Hewitt and Dr. Greenhalgh have related cases where physicians were in doubt, and had even mistaken a common polypus for carcinoma. I have seen several cases of mucous polypi slightly protruding from the cervix that had been treated for granular erosion by repeated applications of nitrate of silver ; and a few years ago I saw a woman, forty-eight years of age, greatly reduced by prolonged hæmorrhages, who presented almost exactly the cachectic physiognomy of carcinoma. She had none of the lancinating pains of



FIG. 24.

cancer, but when the finger was passed into the vagina, it found a knobby hard growth occupying the place of the cervix, and the os could not be felt.

When the ordinary speculum was used, this growth

filled up its area, and all was in doubt. But, by the use



FIG. 25.

of my speculum, which left the whole vagina freely open to inspection, we found a polypus of mushroom shape fitting almost like a cap over the cervix uteri (fig. 24). The pedicle was short, and the tumour fitted so well the projecting portion of the cervix, that it was scarcely movable. The removal of

the tumour with scissors exhibited an os tinæ perfectly free from all appearance of malignant disease. A not unfrequent form of polypus is represented by fig. 25. This was removed from a lady who supposed it was the womb coming out, because it protruded from the mouth of the vagina. When I told her it was a fibro-cellular polypus, she was greatly alarmed, because she had lost one of her servants by an operation of some sort for polypus.

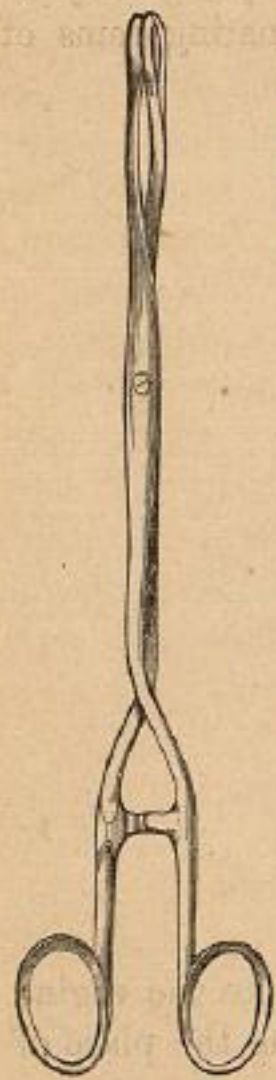


FIG. 26.

All classifications are more or less arbitrary. This polypus might by some be classed in my second subdivision; but as it grew distinctly from the edge of the os tinæ, although some of its fibres took root in the cervical mucous membrane, I have put it in the first class.

We often find small polypi in the canal of the cervix. They vary from

the size of a grain of wheat to that of a small bean, and are called nabothian polypi. (See fig. 19, page 62.)

They may be very effectually destroyed by the mechanical pressure of a sponge tent worn for twenty-four hours, or they may be pulled off by forceps, or cut off with scissors; I prefer the latter. We often fail in the extraction of small mucous or cystic polypi, for the want of a suitable instrument.

Dr. McClintock uses a fenestrated forceps for these, which answers admirably. A vulsellum is not suitable here, because their tissue is so delicate that it is apt to tear out. Fig. 26 represents Dr. McClintock's polypus forceps. They compress the pedicle, while the little polypus lies unhurt in the fenestral opening. But for larger ones, such as fig. 25, Charrière has made for me



FIG. 27.

forceps of this sort (fig. 27), with which we seize the pedicle of the polyp, when we wish either to tear it away or cut it off with scissors.

But suppose, for some reason, we wish to remove a polypus by torsion. To render this process perfectly safe, it is necessary that the pedicle be long and slender,

and that the tumour be easily rotated. This process has been applied to the small nabothian polypi and also to intra-uterine fibrous polypi with slight attachments. Laying hold of the polypus with a fenestrated forceps, if of the first variety; with a vulsellum, if of the second; we rotate gently from left to right, and so continue till all resistance ceases, when we remove the severed growth. I am no advocate for this plan, unless under very exceptional circumstances.

There are but few polypi that cannot be safely removed with scissors, yet we may have reasons for not wishing to resort to them. The patient may be so exhausted by repeated and prolonged hæmorrhages, that we cannot afford to risk the sudden loss of an additional small quantity of blood; or from some theoretical grounds we may prefer not to cut. For instance, in Paris, surgeons often refuse to perform the simplest cutting operation when there is much erysipelas about, asserting that a clean cut is more apt to produce erysipelas, and even pyæmia, than the lacerated wound of the *écraseur*. Be this as it may, let us suppose that we have to deal with a polypus too formidable for scissors or for torsion. Our only resource then is the *écraseur*,—and a very sure and safe one is it: sure in its action and safe in its consequences. Formerly a ligature was passed round the pedicle of such tumours, and tightened from time to time till the mass sloughed away; but that day has gone by, never to return.

The removal of a polypus by ligation is really a dangerous operation, resulting not unfrequently in pyæmia and death, which seldom indeed happens when the *écraseur* is used.

We owe this admirable instrument to the inventive genius of Chassaignac.

It has been used in almost every imaginable way, and often most inappropriately; for instance, for fistula in ano, for the removal of simple steatomatous tumours, for excision of the mamma, for lithotomy, and even for amputation of the thigh. But the time is coming, indeed is even here, when the true surgeon will raise it to the dignified position that it merits, by confining it to such operations as are peculiarly its own. For the ablation of diseased structure in erectile tissue it cannot be over-estimated. In Chassaignac's ward in the Lariboisière Hospital I have seen cases where malignant disease of the tongue called for the removal of that organ, which was done safely by this admirable instrument, and the patients remained well for a long time afterwards. In the same wards I have seen more than one case in which M. Chassaignac had removed the anus, and a large portion of the rectum, for cancerous disease, an operation that would have been utterly impossible by any other means, and one of these patients had been well for more than a year.

These are, fortunately, rare cases, but they prove the value, efficiency, and safety, of the *écraseur* under the worst possible conditions. But it is for the removal of hæmorrhoids and uterine polypi that this instrument is to find its most common and appropriate field of usefulness.

Many modifications have been made of Chassaignac's chain *écraseur*. M. Maisonneuve uses a stiff but malleable iron wire, to be pulled through the tissue. Dr. Braxton Hicks makes a cord of several fine threads of wire; while others fix one end of the chain (Charrière and Tieman). I have tried all these, and have no hesitation in saying that none of them are in practice equal to Chassaignac's original instrument. It generally cuts

through neatly, without drawing out long shreds of tissue, leaving us uncertain when the tumour is entirely severed, if it be hidden from view, as it must be sometimes. Every little click of Chassaignac's instrument measures for us most accurately the distance over which the chain passes, warning us to rest. The resistance we encounter in tightening it shows us the density of tissue, and is the index to move slower or faster. Whereas, every turn of a screw, whether a quarter, half, or whole revolution, leaves us in doubt whether it is too much or too little—while it is a power unmeasured and unappreciated by the sense of feeling. This is strongly proven by the fact that I have never broken one of Chassaignac's instruments, while I have broken two worked by a screw. The same thing has occurred in the dexterous hands of Dr. Graily Hewitt and of Dr. McClintock.

McClintock, in speaking of the *écraseur* for uterine polypi, says, "I have generally felt it necessary to bring the bulk of the tumour beyond the external genital orifice; and this necessity it is that limits its range of applicability."* The difficulty of placing the chain around the pedicle of the tumour while in the vagina, and the still greater one of applying it within the uterus, has been heretofore the great barrier to its universal adoption. But I hope this difficulty is now overcome. I do not think the polypus should ever be drawn outside for *écrasement*, or that there should be any undue traction made on the uterus while the *écraseur* is being worked. My plan is this. The patient in proper position, the speculum (fig. 5) is introduced, and we have a complete view of everything in the vagina. If the

* "Clinical Memoirs," &c., p. 171.

tumour is in the vagina, there will not be the least difficulty in applying the chain of the *écraseur*; but, to do this with facility, it is necessary to prevent the chain from folding on itself, as we attempt to carry its loop over and beyond the tumour. This was to me a source of annoyance for a long time, but at last I have succeeded in giving the chain a rigid fixity that makes it very easy to do this.

Where the polypus has descended into the vagina, Maison-neuve's wire, or Dr. Braxton Hicks' cord of wire, answers very well; but where it is intra-uterine, with a contracted cervix, we ordinarily fail in their application, just as we do with the chain of Chassaignac.

I have added to Chassaignac's instrument a *porte-chaine*, which may be described as a pair of dilating forceps with spring blades, which render the chain stiff, so that it may be passed straight into the vagina, or into the cavity of the uterus, as easily as we would a sound or a sponge probang. After which the chain is expanded by the blades of this *porte-chaine*.

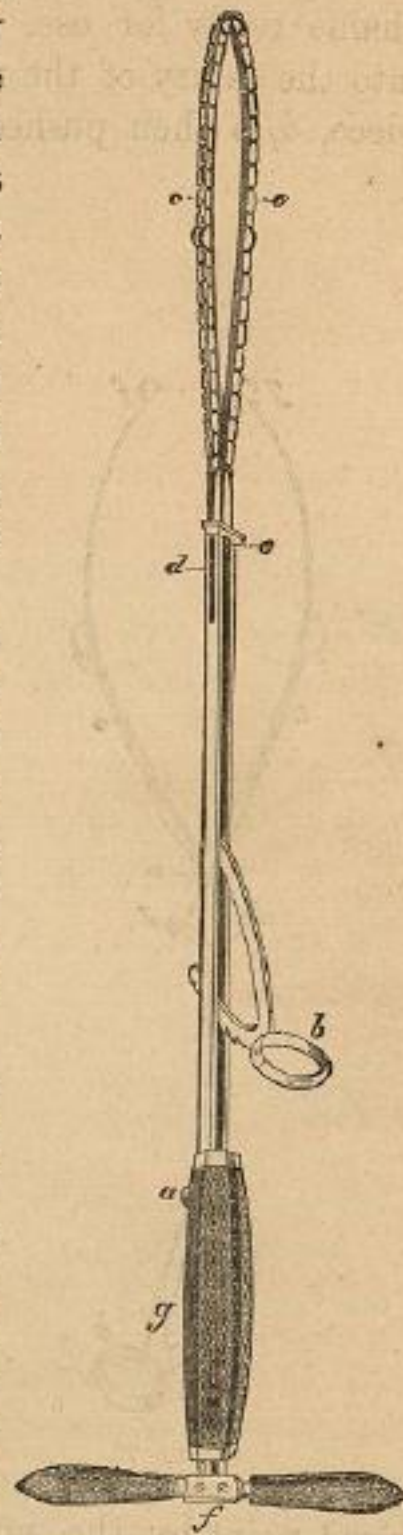


Fig. 23.

Fig. 28 represents the écraseur with the porte-chaine ready for use. It is carried into the vagina or into the cavity of the womb thus arranged; the thumb-piece, *b*, is then pushed forward and fastened at the de-

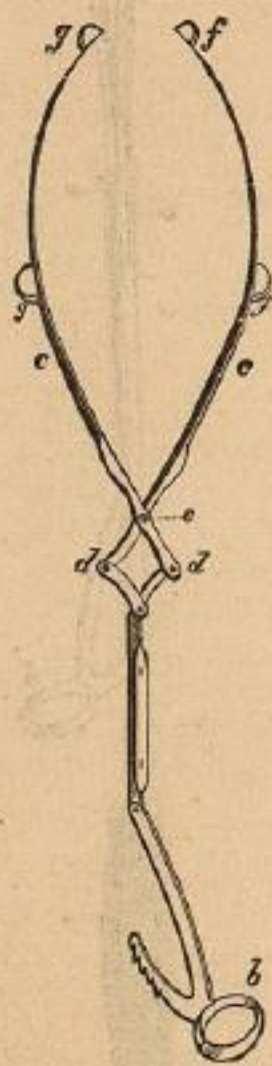


FIG. 29.

sired point by the notched rack, which is seen passing through the shaft of the instrument; this movement dilates the spring blades of the porte-chaine, and ex-

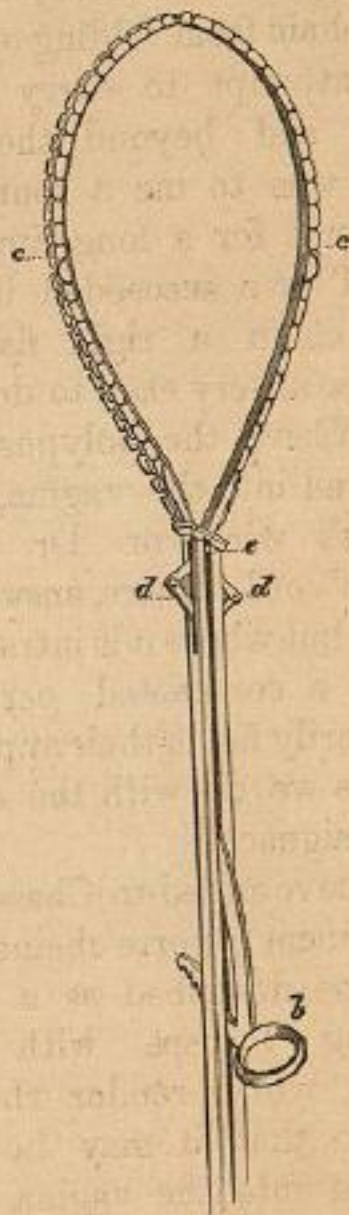


FIG. 30.

pands the chain to the required extent. When the chain is made to encircle the pedicle of the tumour, the porte-chaine is drawn up into the shaft of the instrument simply by elevating the thumb-piece, *b*, and pulling it back in a straight line for three or four inches, while the instrument is pushed forward along the chain just as if there had been no porte-chaine present. The porte-chaine is not wholly removed from the écraseur; it lies in its place in the shaft while the operation is being finished.*

Fig. 29 represents the porte-chaine detached from the écraseur, for the purpose of showing its mechanism. When the thumb-piece *b* is pushed forward, *e* being a fixed point as shown in figs. 28 and 30, the joints *d d* must of necessity be forced apart, and this it is that dilates the blades *c c*, which, holding the chain securely in its grooves *f f*, *g g*, carries it out to the required degree, as represented in fig. 30.

Fig. 30 shows the angles or joints, *d d*, projecting through slots in the sides of the shaft. The only thing necessary to insure the perfect working of the apparatus is to see that the pivot *e*, as shown in all three of the cuts, is quite at the extreme end of the groove, at the top of the instrument. If by chance it should not be, then the joints, *d d*, will not have room to expand and project out of the sides of the instrument through the slots made for this purpose.

The chain is worked by a hidden rack in the handle, *g* (fig. 28). When the button, *a*, is pushed towards *d*,

* The mechanism of this instrument has been greatly simplified since I presented it to the Obstetrical Society in December, 1864, and published an account of it in the *Lancet*. For this improvement I am indebted to Mr. J. Mayer, instrument-maker, 51 Great Portland Street.

the teeth of the rack are caught by the notches in the sides of the two long shafts that run from *f* through the whole length of the instrument; when it is moved towards *d*, then its teeth are elevated out of these notches, and the chain and porte-chaine can be freely pushed up and down the shaft like the piston-rod of a syringe. This part of its mechanism is exactly the same as that of Chassaignac's instrument, except that it is simplified, hidden from view, and not in the way of the operator.

Let me illustrate the principle of its application by a clinical observation. In February, 1863, Dr. Morpain, of Paris, invited me to operate on a patient of his, who had a polypus as large as a goose's egg projecting partly from the cavity of the uterus.

Fig. 31 represents its position, relations, and attachment. A moment's glance shows the difficulty of passing a chain around the pedicle of a tumour thus

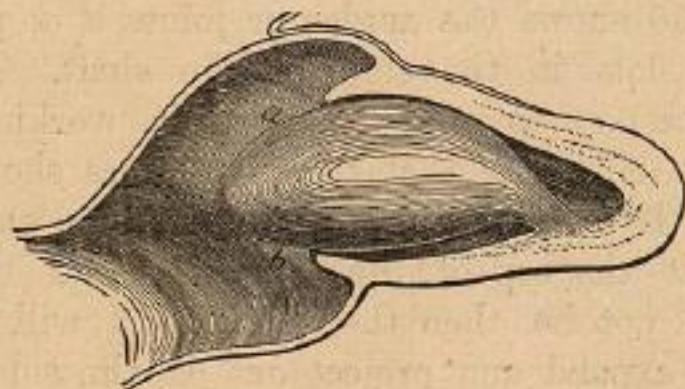


FIG. 31.

situated. The patient, on a table, was placed in the left lateral semi-prone position, and, when the speculum was introduced, it elevated the perineum and posterior wall of the vagina, and brought completely into view the tumour, as represented in the engraving.

There is great temptation under such circumstances

to seize the projecting portion of the polypus with a strong vulsellum or tenaculum, and pull it towards the os externum. But this is not the best thing to do, because it will close up the mouth of the vagina and obstruct both sight and manipulation; for the mouth of the vagina, even in favourable cases, would hardly be forced open more than an inch and a half from the urethra back to the perineum, and we need all this space for operating.

Here a small tenaculum was hooked into the tumour at *a*, and by it the polypus was pushed gently downwards and forwards against the anterior wall of the vagina. It was held firmly, while the stiffened chain of the écraseur was passed along the upper or posterior surface of the tumour from *a* up to the fundus uteri at *c*. This done, the tenaculum was removed, and the chain of the écraseur opened out in the cavity of the uterus to a sufficient extent to allow the tumour to pass through it. This was effected by hooking the tenaculum at *b*, and raising the end of the tumour up towards the posterior wall of the vagina, at the same time that the écraseur was pressed in the opposite direction. This movement placed the middle portion of the chain parallel with the anterior face of the tumour, while its loop, or distal portion, still remained stationary at *c*. It was thus made to embrace the pedicle, and it only remained to pull the porte-chaine back at the same moment that the shaft of the instrument was pushed down on the chain, which was tightened closely around the pedicle. The operation was then finished as easily as if the tumour had been wholly outside the body, and that, too, without the least strain or traction on the uterus or surrounding organs.

This operation was done with the assistance of Dr.

Morpain, Sir Joseph Olliffe, and Dr. W. E. Johnston. Since then (February, 1863) I have had every reason to feel satisfied with the porte-chaine, whether the polypus was in the uterus or simply in the vagina.

When I was in Dublin, in August, 1861, Dr. M'Clintock asked me to see a young woman in the Rotunda Hospital who had an intra-uterine polypus. It was about the size of a pullet's egg, and entirely within the cavity of the uterus (fig. 32). She was a virgin; the vagina was of course small, and

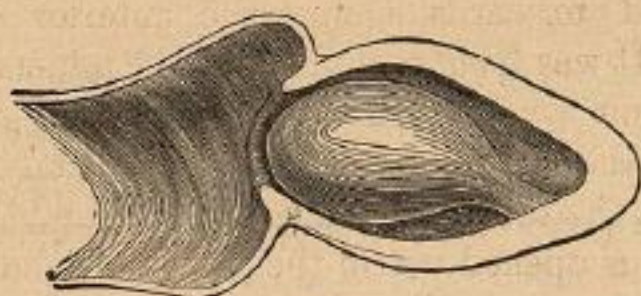


FIG. 32.

the mouth of it quite contracted; thus any manipulation was difficult. We succeeded, however, in getting a rope of wire on the tumour two or three times, and succeeded as often in breaking it; and thus, for the want of proper machinery, we were compelled to let the case alone for the time being. If we had then had the Chassaignac instrument with the porte-chaine, there would have been comparatively little difficulty in removing the tumour at once.

Intra-uterine polypi grow from the fundus, or from the anterior or posterior walls of the uterus, but more frequently from the anterior. I do not remember to have removed any with simply a lateral attachment. It has so happened that I have seen more polypi attached to the anterior than to the posterior face of the uterine

cavity. If observation should establish this as a rule, it will be very fortunate in a surgical point of view; for it is much easier to pass the chain of the écraseur around the pedicle of a polypus attached anteriorly than posteriorly, if it be entirely intra-uterine. An example of each variety may serve for clinical illustration. Dr. Morpain's case already related is a fair specimen of one variety; but, as showing the improved methods of modern surgery, I may be permitted to allude briefly to another similar case.

In February, 1860, a lady from one of the eastern States consulted me on account of her sterility. She was thirty-two years old; had been married ten years; enjoyed very good general health, and had leucorrhœa and some pain with menstruation, which was not profuse. The uterus was in proper position, but felt larger than natural. I introduced a sponge tent to ascertain the cause of this hypertrophic state. On its removal, the finger passed into the cavity of the uterus detected a



FIG. 33.

fibrous polypus of the size of a partridge's egg, attached anteriorly, as represented in fig. 33. Another sponge tent of larger size was introduced, and on its removal

six or eight hours afterwards, I succeeded in passing the chain of the *écraseur* around the pedicle, when it was easily and quickly severed. This case strongly illustrates the present improved methods of exploration; for here we could not have determined the cause of the uterine enlargement but by passing the finger into the cavity of the organ after dilatation of the cervix. Indeed, before the use of sponge tents we could not by any possibility have diagnosed such a case as this. But now we determine with the minutest accuracy, not only the presence, but the size, position, relations, and attachment of all such tumours. Before the use of sponge tents, if we suspected from rational symptoms an intra-uterine polypus, we could only wait from month to month—sometimes from year to year—for it to grow and to force its way into the vagina, before we could interfere surgically for its removal. But now we no longer doubt and procrastinate; we no longer let our patients bleed till they become bloodless and dropsical; but we ferret out at once the source of mischief, and remove it from its once secure hiding-place. This is a great advance in surgery; and no man of twenty or thirty years' experience can look back on the days of *ergot* and *Gooch's canula*, and contrast them with the present time of sponge tents and the *écraseur*, without a thrill of delight at the progress of our noble calling.

Having now given clinical illustrations of polypi growing from the os, in the canal of the cervix, and in the cavity of the uterus attached to the anterior wall, I will continue the series by examples of polypi growing from the fundus and the posterior wall. As said before, I do not remember any with a simple lateral attachment.

A. H., aged twenty-six, gave birth to her only child

when she was but fourteen. Had two or three miscarriages since, at about the third month. Had menorrhagia for many years, very profuse, painful, and coagulated, lasting usually ten or twelve days. Had forcing pains during the whole time of the flow, and, singularly enough, they were always worse in the forenoon. This patient was sent to the Woman's Hospital by Professor J. C. Nott, of Mobile. The womb was in its normal position, and evidently enlarged. The os admitted the end of the index finger to the depth of the nail. She had just menstruated, and there was a very profuse muco-purulent discharge from the cavity of the uterus. For years her suffering had been a mystery. A sponge tent unravelled it in a few hours. She had a fibroid polypus attached to the fundus by a short, thick pedicle (fig. 34). It was impossible to place the chain



FIG. 34.

of the *écraseur* around it, through a comparatively contracted cervical canal. This was before we had learned the use of wire as a substitute for the chain. With a *Gooch's canula* I put a strong fishing-line around the

pedicle, and severed it with the screw *écraseur*. It was difficult to get a cord strong enough to cut through its fibrous tissue. It snapped a large catgut guitar-string, and then a silk cord. With Chassaignac's *écraseur*, armed with a *porte-chaine*, there would have been no trouble.

So far I have spoken only of successful operations; but there is such a thing as failure, and even death, in consequence. Fortunately, these are rare. I have removed a great many intra-uterine polypi, and all without accident, except in two instances, which were followed by pyæmia. One of these recovered, the other died. This latter was an example of polypus with attachment to the posterior wall by a thick, short pedicle. It was the case of a lady about sixty years old. I was invited to see her by Professor Metcalfe, of New York. She was the mother of a large family of grown-up children; had ceased to menstruate some ten or twelve years before, but for the last three or four years had suffered alarming hæmorrhages, which greatly prostrated her. The uterus was felt to be enlarged, but the os was not larger than the point of a common probe. A small sponge tent was introduced, and on the next a larger one. This dilated the canal of the cervix sufficiently, but the os barely admitted the end of the finger, and felt as inelastic as if bound by wire. Of course, no further effort could then be made. Eight or ten days after this we succeeded in dilating the cervix, so as to explore most satisfactorily the cavity of the uterus, when we found a hard fibrous polypus, with a broad, thick pedicle, attached to the posterior wall, close to the fundus (fig. 35). This was in May, 1862. I failed to put the chain around the pedicle. Two weeks afterwards another series of sponge tents was followed by another

failure. The tumour was unfortunately lacerated a good deal by the *vulsellum*, which was used to draw it downwards and to fix it while efforts were made to pass the chain around it. Two or three days after this a



FIG. 35.

chill ushered in an irritative fever, which unhappily terminated fatally. Here a valuable life was lost because our art did not furnish the proper surgical appliances for relief. With the *écraseur*, as now supplied with the *porte-chaine*, there is every reason to believe that we would have succeeded in our first efforts.

In cases like this, occurring in advanced life, we often find it difficult to dilate the os externum. The tent may expand the canal of the cervix to the size of the finger, while the os tincæ may not become larger than a No. 10 bougie. Under these circumstances, if we attempt to force the finger into the cervix, the contracted os feels rigid and resisting as if bound round by a fine wire. And here, instead of repeating the tents, it is safer and better to divide with the knife the sharp, well-

defined edges of the contracted os, which will then permit the finger to pass at once to the cavity of the womb. This diagram (fig. 36) represents the relative expansion of a tent worn for six or eight hours, where the canal of the cervix was dilated, while the os tincae remained comparatively contracted:—*a*, the cervical portion; *b*, the part constricted by the os; *c*, the vaginal portion.



FIG. 36.

I have now completed the series that I proposed to give as types of this disease.

Time was when women died of polypus without any effort being made for their relief. This is not so now. No delicate operation is easier; none more successful. Life is sometimes lost because we think the patient so near death that any interference would only accelerate the fatal issue. This is a great mistake. To save life where death is imminent, we are justified in assuming great responsibilities and even in taking great risks. I fear that we sometimes hesitate to do our duty by asking ourselves the question, "How will it affect me if I fail?" It has been said of a great American lithotomist that he often refused his skill to bad cases because they might spoil the statistics of his unparalleled success.

In December, 1861, Mr. Preterre, an eminent American dentist in Paris, asked me to see Madame R., in consultation with her physician. She had menorrhagia for many years, and was extremely prostrated by it, and by a profuse muco-purulent vaginal discharge, which had been present for six or eight months whenever the hæmorrhage ceased. She had been seen by many of the most eminent surgeons in Paris, but no one suggested anything for her relief. I found the uterus retroverted

and greatly enlarged, the fundus extending quite to the hollow of the sacrum, and seemingly filling up the whole of this region. A glance showed at once that it could be but one of two things—a polypus or a fibroid tumour. The os tincae admitted the end of the index finger. I was anxious to determine the nature of the case, and made gentle but persistent pressure with the finger for some moments through the cervix. It gradually yielded to the force, and the finger, gliding to the cavity of the uterus, detected an enormous fibrous polypus, which could not pass outwards because of the retroflexion. I was obliged to be in London the next morning, but promised to return to Paris in a week, for no other purpose than to apply a sponge tent and remove the polypus for Madame R. Five or six days after my departure they telegraphed to me that she was much worse; that a consultation of physicians had decided that it was now too late to attempt any operation, and therefore that it was unnecessary for me to return to Paris. Fortunately, the telegram was not received, and I returned to Paris to find my patient in a state of complete exhaustion. She had a profuse, dirty, offensive, sero-sanguinolent discharge from the vagina, which poisoned the whole atmosphere of her apartment. Her pulse was small and rapid; she was quite anæmic, and presented all the appearances of blood-poisoning. On passing my finger into the vagina, I found it entirely filled by an immense fibroid polypus in a state of decomposition. She was evidently dying from the absorption of the detritus of this fetid mass. At my first visit, a week before, this tumour was wholly intra-uterine, but now it filled the vagina. I infer that its escape from the cavity of the uterus was due to powerful contractions provoked by the forcible introduction of the finger

for exploration, for she grew worse from the moment of my visit. She had forcing pains, as of labour, for a while, and afterwards passed into the low condition in which I found her. Its pedicle (as is most usual) grew from the anterior wall. What was to be done? There was assuredly but one course to pursue. If we allowed this great mass to remain there and slough away, death was absolutely certain. Its speedy removal gave the only hope of rescue. Her physicians consented to its *écrasement*, which occupied ten or twelve minutes. Vaginal washes, wine, and a generous diet soon completed the cure. If I had received the telegram, she would certainly have died, and I should have been censured by her friends for hastening the fatal issue, inasmuch as my previous visit was the inauguration of a new phase of her sufferings. If I had been afraid to operate because she was almost in a moribund state, she would unquestionably have been lost. For the successful after-treatment of this case I am indebted to Dr. Morpain.

I have related this case perhaps too minutely, but it is to encourage the young man never to falter in the clear path of duty to his patient, and to show that extreme exhaustion is no barrier to the mere operation; for, when effected by the *écraseur*, there is no danger of hæmorrhage, and very little of any other character.

I have no idea how many polypi Dr. Emmett and myself have removed at the Woman's Hospital and in private practice, and the case of Professor Metcalfe above related is the only fatal one. This great success is certainly due to the fact that we always used the *écraseur* or scissors. It would seem that by these the operation is almost always safe, while by deligation it is fraught with great danger.

Dr. Graily Hewitt is wholly opposed to deligation; so are many other recent writers. Dr. M'Clintock has written most clearly and ably on this question.* He reports ten operations by ligature, of which three were fatal, and twenty-four by knife, scissors, or *écraseur*, without a single death. He says, moreover (p. 183), that "a very high rate of mortality followed the use of the ligature in the cases reported by Dr. R. Lee; for, of fifty-nine instances where the ligature was applied, nine of the women died, and two of these deaths occurred before the removal of the tumour was effected. . . . Dr. Lee gives thirty-five other cases where polypi were removed by torsion or excision, and amongst these there is no death."

After this, it seems to me that it would be not only hazardous, but absolutely culpable in us ever to resort to deligation when there is any chance of immediate ablation either by excision or *écrasement*.

Before closing this subject, I may mention that Dr. J. H. Aveling, of Sheffield, has added a valuable instrument to our surgical resources for the removal of polypi on the principle of *écrasement*. It is represented in fig. 37. The thumb-piece *a* is connected with the projection *b* by a rod, which slides along a groove in the shaft, which is driven by means of the screw at the handle of the instrument. When the extremity *c* is placed around the pedicle, the part *b* is made to sever it by being forced through till it is entirely lost in the fenestral opening in the curved extremity. Dr. Aveling calls this instrument the Polyprite. It is described in the *Obstetric Transactions*, vol. 4.

* "Clinical Memoirs," pp. 183-186.