

N HYSTEROSCOPY NEWSLETTER

The field of hysteroscopic surgery has seen many advances over the years, from improved optics, the flexible hysteroscope, the resectoscope, hysteroscopic morcellators and most recently, the 5-mm “mini”-resectoscope. The art of hysteroscopy never stops to amaze me.

The ability to perform a complex surgical procedure inside of the uterine cavity, without incisions, in the outpatient setting is revolutionary. Add to this the ability to achieve this without a speculum, tenaculum or cervical dilation; i.e. the vaginoscopic approach.

This “no-touch” technique has a multitude of applications. The vaginoscopic approach allows for the examination of the vagina and the cervix in patient in whom the use of a speculum is not feasible or is too uncomfortable, such as in children, e.g. for persistent vaginal discharge, bleeding or suspected foreign body, in virginal patients, and in postmenopausal patients with significant vaginal atrophy.

This approach is also very valuable in examining the vaginal, cervical and uterine anatomy in patients with Mullerian anomalies, as it compliments imaging studies and aids in surgical planning. Vaginoscopy also allows examination and biopsy of vaginal lesions and vaginal cuff endometriosis.

Other excellent applications for the vaginoscopic approach and hysteroscopically-guided cervical dilation is in patients with intrauterine synechiae or Asherman’s syndrome and in patients at high risk of, or with history of failed hysteroscopy secondary to a false track resulting from the common practice of blind cervical dilation.

This technique provides several advantages, including avoiding a false track, decreased risk of uterine or cervical perforation, and minimizing trauma to the cervix and endometrium, avoiding the bleeding and debris, hence providing excellent visualization.



I feel privileged to practice in this golden age of hysteroscopy, particularly with the coming-together of amazing hysteroscopic surgeons through the innovative Hysteroscopy Newsletter, the Global Congress of Hysteroscopy and the many successful hysteroscopic summits and congresses organized throughout the globe.

Nash Moawad

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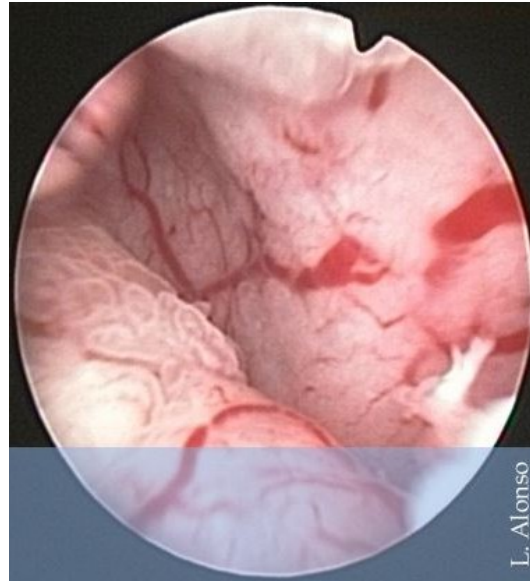
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HYSTEROSCOPY
PICTURES

L. Alonso

*Pattern of complex hyperplasia
with atypical cells in the lining
of the glands*



L. Alonso

*23% of the complex hyperplasia
with atypia would, if untreated,
progress to endometrial cancer*

Endometrial hyperplasia is an overgrowth of endometrial glands, with different shapes and sizes, which causes increased endometrial thickness which results in a greater gland / stroma ratio than observed in normal endometrium. The term endometrial hyperplasia includes different pathologies that have the common feature to increased endometrial thickness. Some of these pathologies have virtually no potential for malignancy while others are clearly premalignant lesions. The pathological diagnosis is the key to the diagnosis of this entity.

Kurman et al (The behavior of endometrial hyperplasia. A long-term study of "untreated" hyperplasia in 170 patients. Kurman RJ, Kaminski PF, Norris HJ. Cancer. 1985 Jul 15;56(2):403-12.) published one of the most important studies describing the evolution of endometrial hyperplasia in which he observed that 1.07% of simple hyperplasia without atypia, 3.4% of the complex hyperplasia without atypia, 8% of the simple hyperplasia with atypia and 23% of the complex with atypia would, if untreated, progress to endometrial cancer. The median time of progression of hyperplasia without atypia to carcinoma has been established in about 10 years, whereas if there is atypia the progression occurs in about 4 years. The presence of atypia is key to the progression to carcinoma.

If you are interested in sharing your cases or have a hysteroscopy image that you consider unique and want to share, send it to hysteronews@gmail.com

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INTERVIEW WITH...

Dr. Ricardo Lasmar, a clever visionary, with his thinking always ahead of time, is able to understand what most of us don't see.

The amount of hysteroscopic procedures are growing worldwide. What makes hysteroscopy an indispensable tool?

Hysteroscopy has grown worldwide and it is due to its main function, which is to perform more accurately the diagnosis of intrauterine disease. It was possible to identify suspicious alterations in ultrasound and hysterosalpingography, allowing anatomopathological confirmation through directed biopsy. Associated with this important diagnostic quality, hysteroscopy has been rapidly evolving to treat these diseases, and in most cases, at the same time of diagnosis. Therefore, hysteroscopy represents an outpatient procedure, minimally invasive, with diagnostic accuracy and immediate treatment, "see and treat". In addition, ambulatory and hospital hysteroscopy represent savings in the cost of public health, whether for immediate treatment or short term hospitalization. I understand that the promotion of hysteroscopy has been happening because of its quality of diagnosis, immediate treatment and low cost.

In 2005, you published a paper about a new presurgical classification to evaluate the viability of hysteroscopic surgical treatment. How did this idea begin?

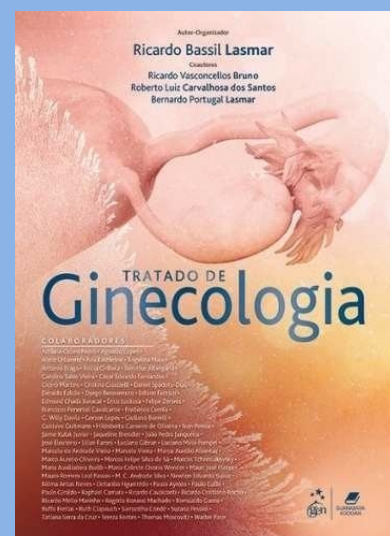
This was probably due to my interest in myomata and adenomyosis and the large number of myomectomies performed. I noticed that the penetration of myoma into the myometrium was important but not sufficient information to estimate the difficulties of hysteroscopic myomectomy. First, my perception at the surgeries, that the myomas in the fundus of the uterus and especially, the cornuas, were more difficult to remove. Second, to understand the difference between type 2, type 1 myoma to the surgery, because it was more important to calculate the volume of myoma in the myometrium, ie even type 1, but with a large mass in the myometrium, the myoma would have the same surgical difficulty as a fibroid type 2. The next step was to mark these parameters and try to evaluate the degree of difficulty that each one led to during hysteroscopic myomectomy. Knowing the risks of the procedure, fluid overload, perforation and bleeding, I also searched the uterine anatomy for some important information, such as: in the middle third of the lateral wall are the uterine vessels and the cornual region is the thinnest of all. With this information, we placed these parameters in a spreadsheet and were giving shape and parameters in the new classification of submucous myoma, until we arrive in this format known by all and very helpful in the preoperative evaluation.



Ricardo Lasmar

Professor Associado de
Ginecologia da Faculdade de
Medicina da Universidade
Federal Fluminense

Brasil



Guanabara Koogan
2017 - 330 pages

Do you usually use any postoperative treatment after hysteroscopic myomectomy?

I do not use any pre or post-operative treatment, only the hysteroscopic review two months after the surgery. The GnRH analog is indicated only in the cases of anemia, since our technique for myomectomy is the direct mobilization of myoma. In this technique, we incised the endometrium until reaching the pseudocapsule, from this point, we mobilize the myoma, releasing it from the myometrium, and then fragment it to withdraw from the uterine cavity. We published this technique in 2002.

What's the role of Hysteroscopy in the evaluation of infertile patients?

The role of hysteroscopy in infertility is to confirm some diagnoses of ultrasound and hysterosalpingography, with better detail and precision, however, only hysteroscopy is capable to diagnosis endometritis, an important cause of infertility and poor IVF results. With hysteroscopy, it is possible, with variation of intrauterine pressure, to assess the distension capacity of the walls, which is important in intramural fibroids and uterus malformations. Intrauterine synechiae may be better evaluated for location, extent and density, and the possibility of treatment at the time of examination. In hysteroscopy, the cervical canal is better investigated than in the other imaging exams, as well as the view of the tubal ostia, with identification of synechiae and micro-polyps inside. For us, hysteroscopy is indicated as a routine examination in patients with infertility, especially in those who will go to IVF.

”Hysteroscopy is indicated as a routine examination in patients with infertility, especially in those who will go to IVF”

Do we completely understand the role played by myomas in infertility?

In the literature, myoma is related to infertility in 5% of the cases and of these fibroids that twist the uterine cavity would be the most important. These myomas that have a submucosal component could act in infertility by competing for free space to the embryo, creating inflammatory conditions that would difficult the embryo nesting, leading to focal endometritis by compression of the opposite wall, leading to uterine dysperistalsis, as well as heavy and prolonged uterine bleeding.

Has hysteroscopy reached it's limit?

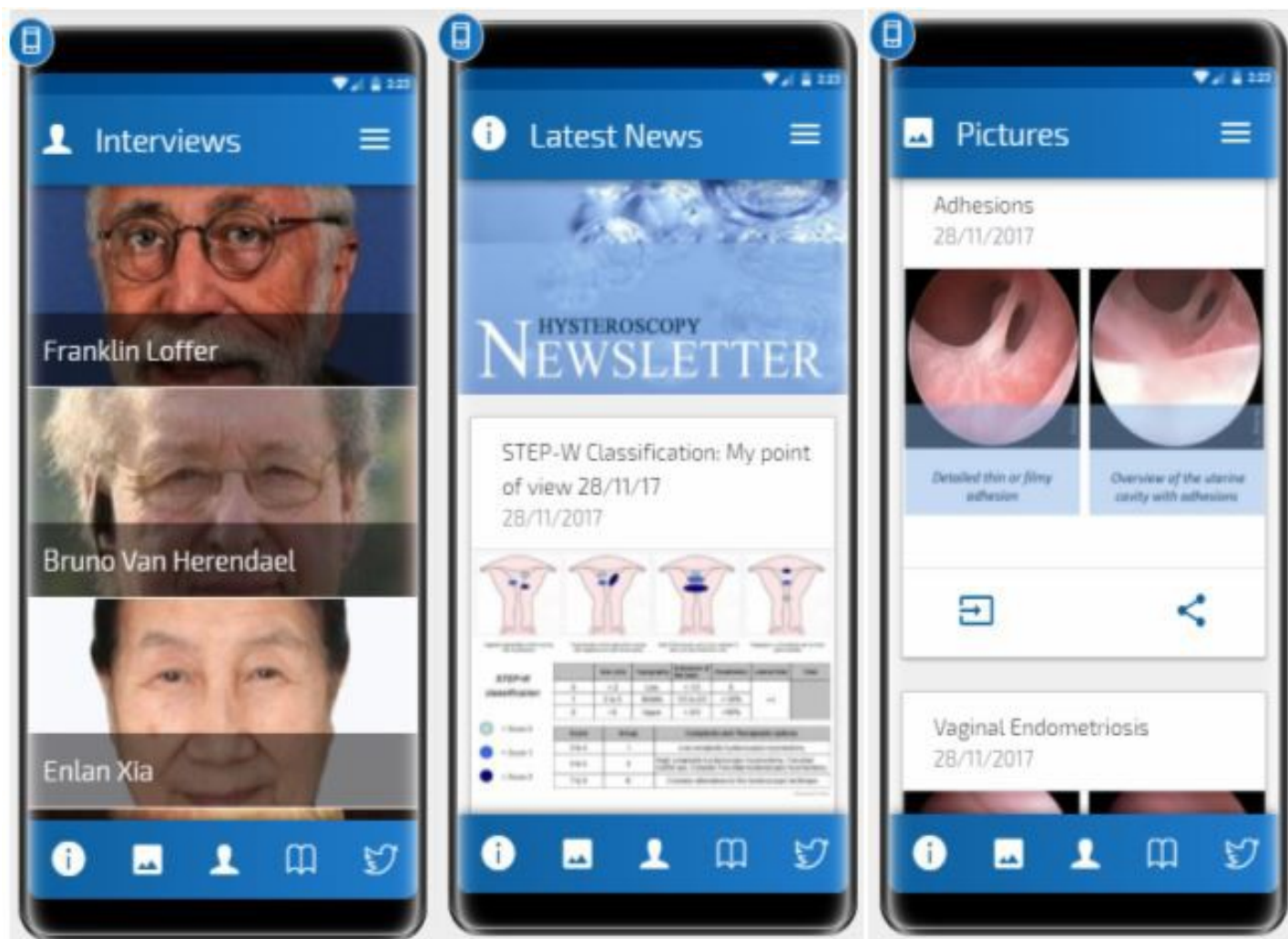
I believe that not yet, because I see that this growing number of gynecologists doing the procedure, leads us to more questions and greater possibilities of solutions, we perceive in the meetings and congresses. We still have a lot to do, how to create protocols, discuss limits and how to overcome them, improve technique and best energy use. The industry has collaborated, creating instruments of smaller diameter and with different types of energy for ambulatory surgery.

Do you have any advice for the young physician that is starting out in the world of gynecologic minimally invasive surgery?

Young colleagues have a great advantage than we did not have at the beginning of gynecological endoscopy, services with great experience. Today you have a significant number of courses and training programs for endoscopic procedures, which enable you to learn the technique and philosophy of minimally invasive surgery. I am optimistic about the future, since learning and accompanying services of great masters, besides can be accompanied in its first procedures by these teachers, guarantee to the fellow beginners in the procedure, a qualified performance. In our service, we are always available to colleagues interested in hysteroscopy, which leads to the permanent improvement of technique and research development.

HYSTERO P rojects

Hysteroscopy Newsletter New App



We're proud to announce that we've created a new APP **available for free download** on iOS and Android . All the information about hysteroscopy available at your fingertips. Stay tuned!!

- Google Play: <https://t.co/6naFW6HB30>
- iTunes: <https://t.co/Q2rulades6>

Coordinators: L. Nieto, J. Carugno, L. Alonso

Original Article

"Hysteroscopic Hydromorcellation" A technique to treat fibroids with intramural component.

Cinta Vidal Mazo

Obstetrics and Gynecology Service . Hospital Juan Ramon Jimenez . Huelva, Spain

Uterine fibroids are the most common benign pelvic tumors of the female genital tract. The incidence is approximately 25% to 30% and may be higher depending on race, family history and genetics. Submucosal fibroids are frequently associated with abnormal uterine bleeding and infertility and represent 5.5% to 10% of all uterine fibroids.

Submucosal fibroids can be localized in any part of the uterine cavity. Some are at the fundus other are located anterior, posterior or on the lateral uterine walls. Small fibroids can also arise from the cornual regions, which could block the fallopian tube ostium. Some fibroids are located in the cervical canal.

In 1993, in the face of the surgical complexity posed by some deeply penetrating submucosal myomas, Wamsteker et al. proposed a classification system for submucosal fibroids to allow the prediction of the degree of difficulty of the surgical procedure, depending on the degree to which the myoma penetrates the myometrium. With this classification, gynecologists can estimate the probability to complete the hysteroscopic removal of the submucosal fibroid in one procedure. The Wamsteker classification was adopted by the European Gynecological Endoscopy Society (ESGE) and the leiomyoma classification system of the International Federation of Gynecology and Obstetrics (FIGO) includes the Wamsteker classification for submucosal fibroids. Figures 1 and 2

According to this classification, a myoma G0 is completely inside the uterine cavity and appears only attached to the wall of the uterine cavity by a thin pedicle; a myoma G1 has its largest part (50%) in the uterine cavity; and a myoma G2 has its largest part (50%) in the myometrium.

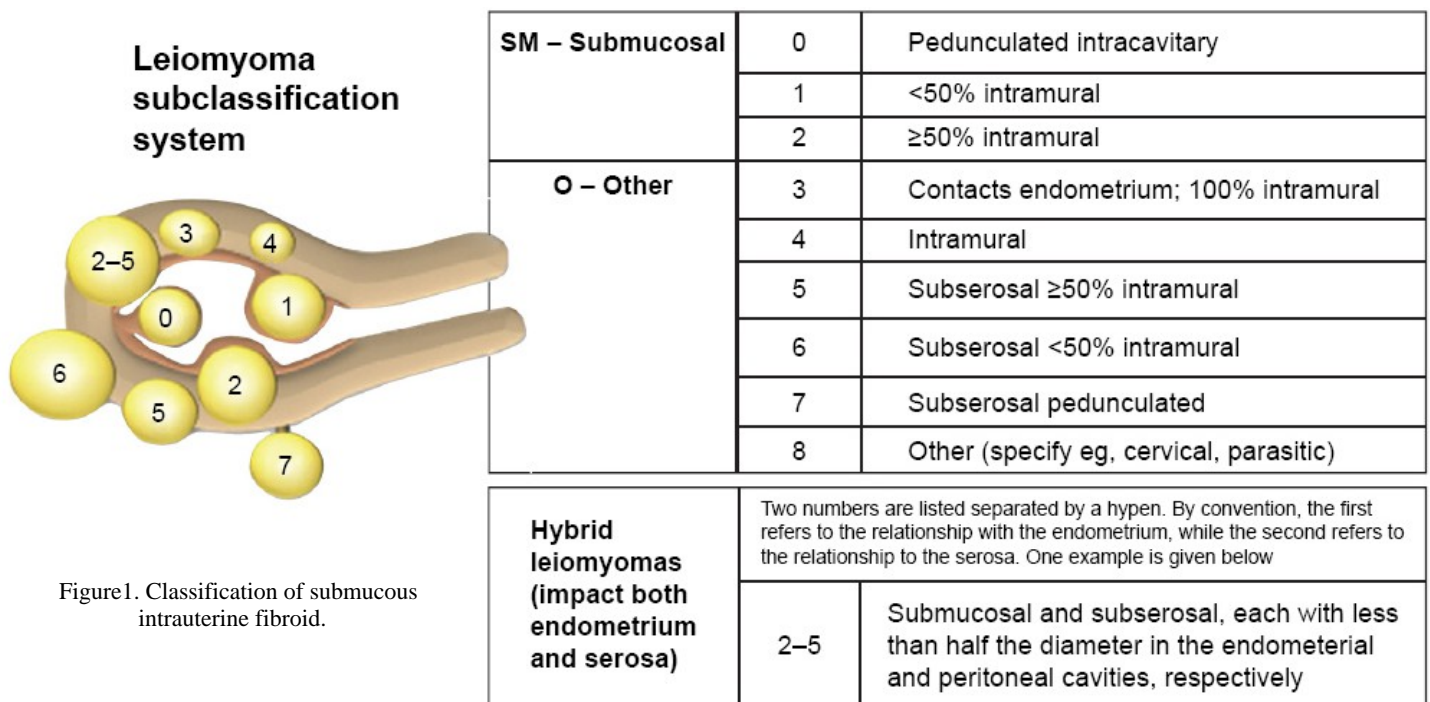


Figure1. Classification of submucous intrauterine fibroid.

Lasmar et al. (2005) proposed a new preoperative classification of submucosal fibroids that considers not only the degree of penetration of the fibroid in the myometrium, but also other parameters that include the extension of the base of the fibroid with respect to the wall of the uterus, the size of the nodule (cm) and the topography of the uterine cavity. The authors found a greater correlation of this new classification with the complexity of the myomectomy, the length of the procedure and the fluid deficit, than with the previous other classifications that only value the portion of the fibroid invading the myometrium. Figure 3

Another feature to add to the complexity of hysteroscopic myoma surgery is the concept established by Haimovich of continent / content, considering the ratio of the size of the myoma to the uterine cavity. Figure 4

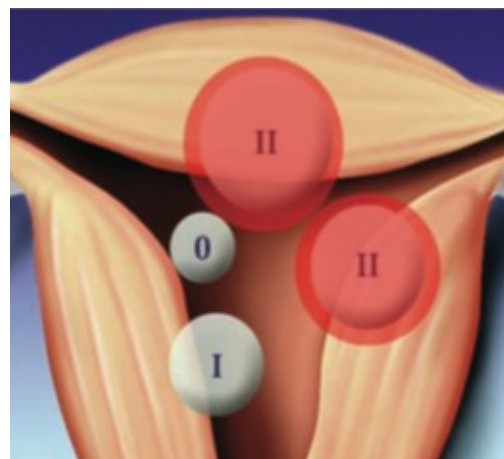


Figure 2. European Society of Gynaecological Endoscopy classification. Submucosal myomas are classified as Type 0, Type I, or Type II, depending on the depth of myometrial penetration.

INDICATIONS FOR HYSTEROSCOPIC MYOMECTOMY

Abnormal uterine bleeding (AUB) represents the most common indication for hysteroscopic myomectomy. In fact, submucosal myomas are associated with abnormal uterine bleeding more than intramural and subserosal fibroids, presumably due to the distortion of the cavity and an increase in the bleeding surface of the endometrium.

Although most women affected with fibroids are fertile, the available evidence suggests that fibroids can interfere with fertility, and submucosal fibroids are reported to exert the most detrimental effects on pregnancy rates. Reproductive problems represent the second main indication for hysteroscopic myomectomy, although the lack of randomized studies does not allow to draw definitive conclusions on the improvement of spontaneous fertility after hysteroscopic myomectomy.

Less frequent reported indications include dysmenorrhea, nonspecific pelvic pain, and asymptomatic submucosal fibroids in postmenopausal females prior to initiate hormone replacement therapy.

TREATMENT OF SUBMUCOUS MYOMAS

Hysteroscopic myomectomy is the surgical procedure of choice for the treatment of submucosal fibroids, it is less invasive than other methods of treatment, and has a short recovery time. However, current literature has revealed some limitations of the hysteroscopic approach to the treatment of submucosal fibroids, such as the size, location and position of the myoma and associated with risks such as longer operation time, incomplete removal of myomas, and uterine perforation.

The development of endoscopy has made submucosal fibroids accessible and resectable from the inner surface of the uterus. During the last 20 years, thanks to advances in instruments and the improvement of techniques, hysteroscopic myomectomy has acquired the status of "surgical technique" and, at present, represents the standard minimally invasive surgical procedure to treat intra-cavitary fibroids.

Efforts to improve intrauterine treatment have led biomedical engineering to develop new devices capable of combining the advantages of ambulatory hysteroscopy with the effectiveness of the resectoscope. Using a modified prototype based on an orthopedic arthroscopic tissue shaver, Dr. Mark Hans Emanuel from the Netherlands was able to create the first generation device that used mechanical energy instead of electricity, thus creating hysteroscopic morceration.

Recently, new devices have been introduced into clinical practice, known as intrauterine morcellators (IUM) and consist of a set of 2 metal tubes, hollow, rigid and disposable with a wide range of diameters adaptable to the use of 5.00 to 9, 00 mm hysteroscopes.

The possibility of treating the most common intrauterine lesions in a consultation without the need for cervical dilation, general anesthesia and monopolar/bipolar energy may represent an important step to improve perioperative results, patient satisfaction and reduction of cost.

MyoSure® TISSUE REMOVAL SYSTEM

In 2009, the FDA approved a second hysteroscopic morcellation device: the MyoSure® tissue removal system (Hologic, Bedford, MA). Like the TRUCLEAR, approved in 2005 by the FDA, of the first generation, the second-generation MyoSure® system is based on a rotary tubular cutting system with mechanical energy based on suction instead of high-frequency electric power historically used by resectoscopy. The new MyoSure® system has a smaller 2.5mm internal blade that rotates and oscillates within a 3mm outer tube at speeds up to 6000rpm and features an external bezel instead of an internal bevel at the edge of the rotating blade (Figure 5). The blade and the hand-piece are combined into a single-use device which is then connected to the suction and an engine control unit. The device is inserted into the uterus through a 6.25 mm offset lens, 0° custom designed continuous flow hysteroscope that is compatible with all currently available fluid delivery systems.

This hysteroscopic system, by its diameter, allows the performance of myomectomies in an office setting, using only local paracervical block anesthesia.

HYDROMORCELATION TECHNIQUE

Physiologic Principles

The myoma with intramural component -G1, G2- especially the latter, for their total elimination, require a standardized technique and an experienced hysteroscopist. A well performed myomectomy requires the enucleation of the fibroid by dissecting its pseudocapsule.

The pseudocapsule is an independent entity formed by a layer between the myometrium and the myoma. It is formed by collagen fibers and a network of small blood vessels that form a vascular ring.

With the exception of pedunculated fibroids, a vascular pedicle that nourishes the fibroid is not identified. It is the neurovascular network of the pseudocapsule what is responsible for the blood perfusion of the fibroid.

When dissecting the correct plane of the pseudocapsule we find lax connective tissue bridges and multiple capillaries or small vessels. Dissecting this plane is easy because of its laxity and allows the myoma to be dislodged while its blood supply is compromised by cutting the vascularization that surrounds it. Dissection in the right surgical plane decreases bleeding during surgery.

Another advantage of maintaining the right plane of dissection is the preservation of the integrity of the underlying myometrium, thus avoiding scars. Scars on the myometrium affect subsequent fertility and contribute to the formation of postoperative adhesions. This factor is the reason for the low rate of adhesions when keeping the dissection plane of the pseudocapsule.

FUNDAMENTALS OF THE HYDROMORCELATION TECHNIQUE

Uterine leiomyomas, by definition, arise from the muscular part of the uterus. As they grow, they usually migrate to a place of less resistance: towards the abdominal cavity, thus becoming subserous masses or following the path of the intrauterine cavity becoming submucous myomas

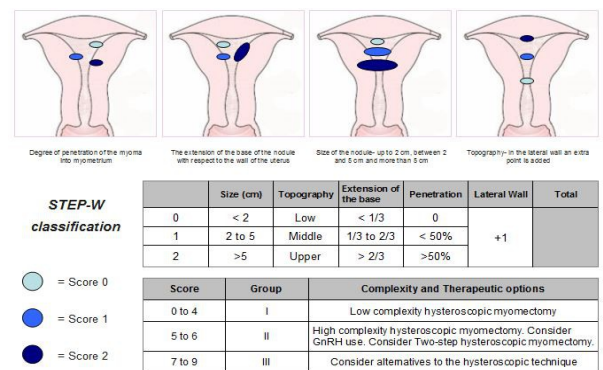


Figure 3. STEPW classification system

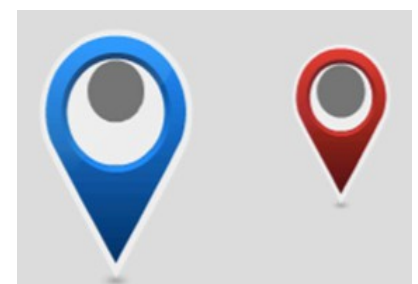


Figure 4. Continent / Content

Bettocchi was the first to understand the importance of this fact in the surgery of submucous myomas when he published his OPPLuM technique. Basically, by opening the mucosa and pseudocapsule of the myoma, it accelerated its natural tendency to migrate to the uterine cavity. This action converted the deep myomas G2 into G1, increasing the success rate of the optimal surgery in only one procedure.

G2 fibroids are the biggest challenge of hysteroscopy. There is very little evidence regarding the management of G2 fibroids in an office setting. This means that any technique in office hysteroscopic management of type G2 myomas supposes an innovative approach in this field.



Figure 5 MyoSure® (Hologic, Bedford, MA).

How can we get to the pseudo-capsule, which by definition is intramural, with the morcellator, which is a blunt instrument with an angle of 0°? What technique should be used?

With the Hydromorcelation Technique "we propose some combined maneuvers with the morcellator and the irrigation system (continuous infusion pump) for the distension of the intrauterine cavity, making changes in the intrauterine pressure with ups and downs of flows that will favor myometrial contractions.

The objective of this combined technique is to weaken the endometrial surface that covers the myoma and thereby allow the myoma to protrude into the cavity. To weaken the endometrial surface that covers the myoma, we will use the Morcellator and to favor the protrusion of the myoma inside the uterine cavity with the myometrial contractions, we will perform "hydro-massage maneuvers" with changes in the flow of intrauterine distension.

We will contact the morcellator with the surface that covers the fibroid, either in its upper pole or in the plane of cleavage of the myoma with the uterine cavity and once this surface is weakened, we will perform maneuvers to change intrauterine distension, lowering and raising the flow pressures, even stopping the procedure for 1 or 2 minutes, in cases of myomas with large intramural component.

With these innovative maneuvers of intrauterine pressure change we favor contractions of the myometrium and allow the myoma to protrude into the cavity, arriving to visualize the plane of the pseudocapsule and its bridges and proceed to morcelate the intracavitary portion that is protruding from the intramural portion of the myoma.

We can perform the myomectomy in only one session if the procedure is fast and the skillful hysteroscopist, since the limitation in any hysteroscopic procedure, either in office or in the operating room is surgical time, because of the risk of fluid overload and in our case, as it is a procedure performed in office due to pain tolerance.

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Hysteroscopy Conundrums

Cystic Adenomyosis

What's your experience in the hysteroscopic treatment of Adenomyosis? Any tips? Any tricks? leave your comments

<https://goo.gl/HexqV6>

Video courtesy Dr. Jose Alanis-Fuentes



Georgi Stamenov Very interesting question and video! 👤 I think coagulation of adenomyotic cabin is necessary and then with knife try to find border between adenomyosis and normal endometrium and after that start to cut !

[Dejar de recomendar](#) | 🍷 1 y tú

⋮ 2meses



Bruno Van herendael We discussed the topic here at my old Alma Mater, de Università degli Studi dell'Insubria - where I was professor endoscopy for 12 years- where we stage the ISGE "Intensive Week" the first stage in the ISGE Accreditation to the degree Expert in MIGS ISGE. I do not belief any longer that there is a place for hysteroscopic treatment of extensive adenomyosis. Adenomyoisis does act as endometriosis hence it must be considered as a progressive disease with a huge smooth muscle involvement hence there rarely exists a clearcut delineation between the process and the tissue in sano. The glands do penetrate deeper than expected and hence cannot be treated with electrical current- as Georgi rightly states -as the collateral damage can cause secondary perforations. - I experienced this problem in one of my patients. The only exception is the so-called adenoid formations where the texture resembles a fibroid.

Mostrar menos

[Dejar de recomendar](#) | 🍷 3 y tú

⋮ 1mes



Ricardo Lasmar The diagnosis is made by ultrasound or MRI. If it is a superficial lesion we treat with focal resection in patients who want pregnancy or ablation more Mirena in who don` t desire .

The problem is the deep adenomyosis, if it`s focal , laparoscopic resection, but difuse, sometimes hysterectomy

[Dejar de recomendar](#) | 🍷 2 y tú

⋮ 1mes



Xiang Xue There are many special and unique features of adenomyosis in hysteroscopy image experientially, such as stiffly cavity wall, irregular endometrium, hemorrhagic cystic lesions, a tiny opening on the endometrium surface that could help us to make a diagnosis for adenomyosis. We have treated the focal lesions of adenomyosis with hysteroscopy resection to intramural endometriomas and surpeficial nodules for some cases, and can achieve certain effect, alleviate pain, even pregnancy. **Mostrar menos**

Dejar de recomendar | 1 y tú

... 1mes



Ivan Treshchak Good finding ! Thank you for videos .

Recomendar | 1

... 1mes



Dr Rajesh Chaudhary Plz kindly post the usg scan of the same uterus.

Recomendar

... 2semanas



Georgi Stamenov [http://www.rbmojournal.com/article/S1472-6483\(17\)30296-1/fulltext](http://www.rbmojournal.com/article/S1472-6483(17)30296-1/fulltext)
This article may be show us best ways for surgical treatment - pathogenesis

Dejar de recomendar | Tú

... 1mes



Péter Török Adenomyotic cyst should be differetiated from other adenomyosis.
Depending on the location this sholud be treated the same way as other endometriomas (stripping)
Ps: just finished an opeeation like this 2 minutes ago;)

Recomendar

... 1semana



Parul Kotdawala Very interesting video. It's very uncommon to find such large adenomyotic solitary lesion. I agree with Bruno that hysteroscopy is not going to be very useful for infertility. But I have drained and saucerized a couple of cases and the dysmenorrhea relief has been tremendous. Both were in their forties and were saved from a hysterectomy! **Mostrar menos**

Dejar de recomendar | Tú

... 1mes



Luis Alonso Pacheco I'm totally agree with [Parul Kotdawala](#) and [Bruno Van herendael](#). In my experience, there is a GREAT improvement in pain relief in those patients, with no more secondary dysmenorrhea

Original Article

AIR INFUSION DURING FLEXIBLE OFFICE HYSTEROSCOPY FOR TUBAL ASSESSMENT: THE PARRYSCOPE TECHNIQUE

J. Preston Parry, MD, MPH

Parryscope Fertility, Madison, MS, USA

“The real voyage of discovery consists not in seeking new landscapes, but in having new eyes.” Marcel Proust.

Hysteroscopists have seen air bubbles disperse through the ostia intraoperatively and wondered whether this truly reflects tubal patency. This uncertainty has occurred in spite of using sonography (without hysteroscopy) to visualize air infused saline to assess tubal patency for over 30 years. Comparable supportive data for hysteroscopy has only been recently published and is called the Parryscope technique. (Parry, JMIG, 2017)

With hysterosalpingography, sonosalpingography, and hysteroscopic assessment, all techniques typically show open tubes to be open and closed tubes to be closed. Choosing one over another typically relates to not just familiarity, resources, and patient experience, but first and foremost accuracy relating to false positive and negative findings. When in 2013 we thought of using air infused saline at hysteroscopy to assess tubal patency, we had not heard of others doing it deliberately, and in searching the literature could not find references validating its use, mention of this approach in review articles for tubal patency, or any source discussing it at all.

Having a clean slate with which to explore the concept, we quickly found accuracy to hinge on a few things before performing an initial trial. These insights centered around the principle that pain induces tubal spasm (or technically uterine spasm around the tube), so the gentler the technique, the easier it would be to avoid false positives where air did not disperse through a patent tube owing to spasm.

Core principles for accuracy include:

1-Small caliber hysteroscopy: We initially tried this with both 2.8 and 3.5 mm hysteroscopes. Because the nulliparous cervical lumen is on average <3 mm, we quickly realized cervical abrasion from the 3.5 mm so greatly increased relative discomfort and tubal spasm that we ceased using the 3.5 mm, except with a patulous multiparous cervix.

2-Flexible hysteroscopy: With hysteroscopic assessment of patency, it helps to have an empty bladder anteflexing the uterus so air bubbles rise to the ostia. However, to minimize cervical abrasion, it is best to use a flexible hysteroscope to adjust to natural contours rather than forcing its advancement with a rigid hysteroscope that may be less amenable to sharp anteflexion.

3-Avoiding uterine overdistention: Outside of predisposing comorbidity (stage IV endometriosis, chronic pelvic pain, etc.), the single highest risk group for discomfort with hysteroscopy had cervical stenosis, particularly if they also had previous tubal disease. With inflow only hysteroscopes, this led to occlusion of outflow at the cervix, leading to uterine overdistention pain (worsening tubal spasm). A slow rate of inflow is particularly important in patients with cervical stenosis, which also reemphasizes the importance of small caliber hysteroscopy, which facilitates outflow.



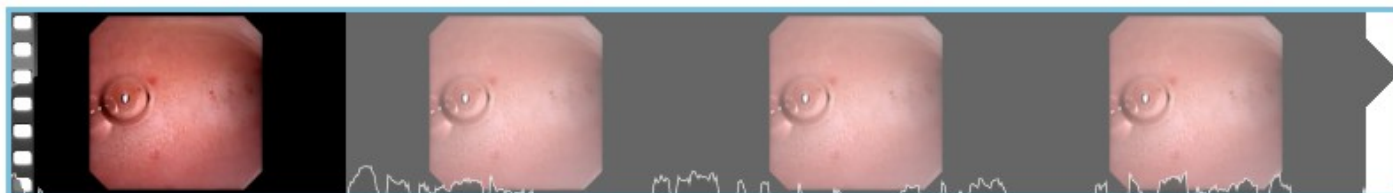
4- Allowing sufficient time for distention prior to air infusion: A top concern was potentially missing a hydrosalpinx. However, if allowing at least 10 seconds with the uterus fully distended before introducing air bubbles, we found this permitted sufficient time for a hydrosalpinx to distend, eliminating the pressure gradient and preempting air bubble entry. With pressure equilibration, proximal patency reflects distal patency. However, with a hydrosalpinx, one would simply know the tube not to be patent and not why, so sonography after hysteroscopy can provide additional information and context. (Of note, to further improve specificity, we rely on a large bubble or a stream of bubbles traversing the ostia, rather than a single tiny bubble.)

In emphasizing these core principles, this isn't to say that different technique can't be used. However, it is our experience with more than a thousand procedures that larger caliber, rigid hysteroscopy and increased pain can be associated with less accurate outcomes. In fact for the rare patients requiring cervical dilation (such as after previous cryotherapy), though this was not done in the published research, we are now considering reassessing tubal patency on a different day, owing to potential spasm from dilation. That being said, one can often observe transient relaxation of spasm (as can be seen in this video).

Performed in this fashion, one can have 98.3-100% sensitivity to tubal occlusion with 83.7% specificity when compared to laparoscopic chromopertubation. (Parry, JMIG, 2017) Additionally, the Parryscope technique is very gentle, with 54% of patients experiencing no discomfort, and 91% mild to no discomfort (typically less than that of a Pap smear or period). (Parry, F&S, 2017) The 8% of patients experiencing moderate, 0.9% severe, and 0.2% extreme discomfort almost universally had cervical stenosis, endometriosis with chronic pelvic pain, or other explanatory circumstances (such as an IBS flare at the time of hysteroscopy). By comparison, HSG had a relative risk of being 110 times more likely to cause extreme discomfort, with a p-value of one in one hundred trillion.

Coupled with the technique being fast (with the average procedure less than five minutes) and that it can be done in the office with reusable instruments, it is convenient and can be cost-effective. Moreover, it can be combined with ultrasound for a systematic evaluation of female fertility in a single visit. If female fertility is primarily ovarian function, tubal patency, and uterine receptivity, one can combine hysteroscopic tubal patency assessment with sonographic antral follicle count, sliding sign, and uterine imaging to have a reasonably thorough sense of the core determinants of female fertility.

WATCH THIS
VIDEO NOW!



Though this technique expands the indications for diagnostic hysteroscopy and is overwhelmingly preferred by patients relative to HSG, there will be those reluctant to try it. We've always believed it will be hard to teach the Michelangelos of HSG to paint with a different brush, while those comfortable with office hysteroscopy will take to it more naturally, as there is truly negligible additional cost in infusing ¼ mL of air in to one's saline. (A link on how to add air bubbles easily can be found at 2:33 on this video.) We fully expect some to try this with larger caliber instruments resulting in pain, changing both accuracy and patient experience. For this reason, wherever possible, we are specific about what we believe to be optimal technique until data validates greater flexibility.

More research can further refine the technique, such as defining optimal infusion pressure and managing the retroflexed uterus. It is likely that further advances will come from those passionate about advancing women's health through hysteroscopy, so it would not be surprising if these came from a reader of Hysteroscopy News. Feedback is welcome at fertility@parryscope.com and I hope we all can contribute to more accurate, fast, and gentle ways of understanding women and their fertility.

HYSTEROSCOPY DEVICES

STEINER-Cusco Speculum

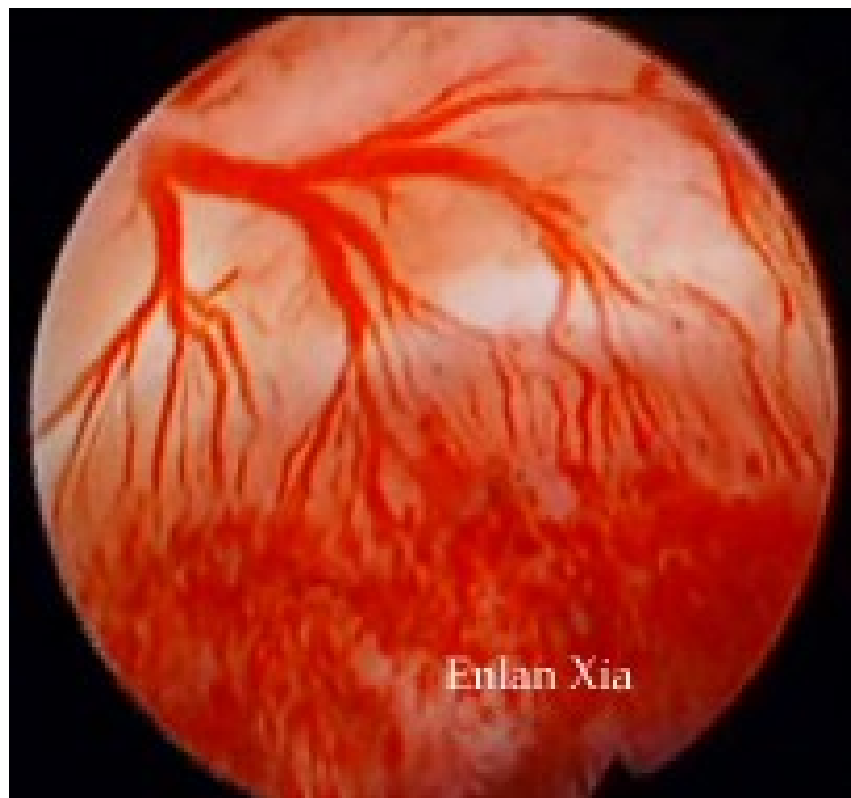


***STEINER-CUSCO Speculum** is the first patented Speculum with free opening at 9 o'clock position.*

Advantage:

- 1. Enabling physician e.g. to fix the Portio with a forceps and insert Hysteroscope without assistance.*
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- 3. No need to hold anterior speculum by an assistance.*
- 4. Essential for Embryo Transfer under Vaginal Sonography.*
- 5- Autoclavable device available in small and medium size.*





WHAT'S YOUR DIAGNOSIS?

Dear Hysteroscopy Newsletter readers,

It was brought to the attention of the Hysteroscopy Newsletter Editorial Board that the images published in the article "Embryofetoscopy" submitted by Dr Aarathi Cholkery-Sing MD, FACOG published on the Jan-Feb 2018 Vol 4 Issue 1 pp 8-10 Brief Review, neglected to disclose the original source of the images. The published images are intellectual property of Dr Lucia Abdala MD, Dr Jesus Ruiz MD and Dr Humberto Espinoza MD and had been previously published in the Journal of Minimally Invasive Gynecology.

J Minim Invasive Gynecol. 2010 Jan-Feb;17(1):12-3.
doi: 10.1016/j.jmig.2009.02.014.

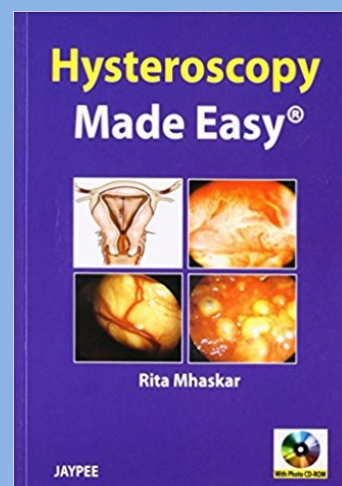
Transcervical embryoscopy: images of first-trimester missed abortion.
Abdala LT1, Ruiz JA, Espinoza H.

PMID: 20129327 DOI: 10.1016/j.jmig.2009.02.014

This misprint is responsibility of Hysteroscopy Newsletter. The Hysteroscopy Newsletter Board of editors regrets this incident and offers a formal apology to Dr Abdala and her team.

The Hysteroscopy Newsletter
Board of Editors

H BOOKS ! Hysteroscopy !



Hysteroscopy Made easy

Rita Mhaskar
2010 Jaypee

Although hysteroscopy pioneered the process of endoscopic viewing of a body cavity, the further progress in this field was delayed for almost two decades. Revival of interest on hysteroscopy and operative hysteroscopic procedures has now revolutionized the realm of possibilities in gynecological surgery. It has become a gold standard for the evaluation of the uterine cavity and cervical canal in the present gynecological practice. All specialists in gynecology must be familiar with its use both as a diagnostic and a surgical tool. Hysteroscopy Made Easy is an attempt to tutor any gynecologist for the performance of hysteroscopy and hysteroscopic surgical procedures.

HYSTEROSCOPY

What do you want? What do you need? or How to make your best office hysteroscopy system

Dimitar Cvetkov, MD. Nadezhda Women's Health Hospital, Sofia, Bulgaria

The first time I touched the magic of office hysteroscopy was during a workshop in Bulgaria in 2010, when Prof. Stefano Bettocchi came and performed several demonstrational operations. It was really amazing how in a few minutes he solved some difficult cases, which even after 2 or 3 curettages did not have the right diagnosis. And all this was without anesthesia, without any medication, without masks...

When I asked "How can I make that?", the company representative told me "It is not so difficult or expensive! We will arrange you a good set for 30,000 euro." It would be quite an investment for me, as I was a resident. And at that moment I wondered how I could make it more accessible for more doctors, especially beginners, as I was. Because when you want to learn driving a car, you do not make it on a Lamborghini or a Ferrari, but on your daddy's old car or a small self-bought one.

The question was "Do I need all those things for my office procedures, if I only need it for diagnosis and small procedures as biopsy or small adhesion resections?" And my answer was "NO". The motto of Linda Bradley "The hysteroscope is my stethoscope" from Hysteroscopy Congress in Barcelona 2017 stayed in my mind and I tried to arrange the working combination for everyone, according to his personal needs.

So one hysteroscopy set consists of parts that are essential – camera, light source, monitor, distension media pump/device, recording equipment, instruments, and, of course, hysteroscope.

First I must mention all-in-one systems. They have integrated camera, light, monitor and recording system in one, and some are really small in size. An example for that is **EndoSee by Cooper Surgical**. In fact it is an excellent device, which was available in few European countries. It has disposable working part, which can be changed for every patient. Disadvantage of EndoSee is the absence of a working channel. You cannot take even a small biopsy, which will be your desire after a few procedures. So you will like to change it quickly.



A similar product is **Hysteroscopic Canula of MedGyn**. It is a device created to perform safe abortion under video visualization. Some clever people decided to make hysteroscopy with it. It is relatively cheap; you can take some biopsy with suction during procedure. The disadvantage of that system is the outer diameter of 7 mm, which requires small cervical dilatation.



There are a lot of classical all-in-one systems, similar to the first of that kind – **TelePack by Storz**, which can give you a mobile complete solution. They are relatively cheap, but the disadvantage is that if one part is broken, the whole system becomes useless.

If someone decides to assemble his own set, the first thing he needs is a camera. Relatively new devices, which can be used as hysteroscopy cameras are smartphone camera adapters, like **ClearScope of ClearWater**. You can change quality of the image and storage capacity of your “camera-smartphone” every month. It is light weight and good quality.

My personal opinion is that the disadvantages of the camera endoscopy adapter are the difficult adjustment of the phone on the camera hole and its easy accidental removal during the procedure – you can lose the image during hysteroscopy. Also it is fixed to the hysteroscope -if you try to perform vaginoscopic approach, during the down and up movements you won't be able to see the screen. But the idea looks great, if you take the cervix with a tenaculum, and maybe could be even better to have a special fixed adaptor for your phone – there are such for iPhone on the market.



For office hysteroscopy purposes you do not need 3chip CCD camera with full HD picture. You can use a simple one with 1 chip CCD. Some colleagues prefer to buy second hand brand camera –prices can be between 300 and 2 500USD. The problem with used ones is that the companies do not supply spare parts for old models. If you decide to do so, spend as much money as you can afford to lose, because such investment is risky.

Otherwise you can choose a USB camera, which resolution is acceptable. On the market you can find brand ones as UbiPack by Comeg, but also similar cameras from Alibaba web for 3 to 5 times better price. The problem with web-ordered one is the service. If you do not buy from a trusted supplier, you can end up with an expensive child's toy for several hundred dollars. On the market there are even HD USB cameras with full HD resolution, but in that case the price reaches the cheapest brand models cameras. In fact, according to the camera, it is up to the doctor to find which image is good for him. I even know about cases when laparoscopy operations are performed with colposcopy camera. For office purposes it will be ideal to combine one camera for hysteroscopy and video colposcopy.

Light source can also be brand new or a used one - halogen, xenon or LED. The problem with these models is the price of bulb replacement. Several times colleagues have called me to ask for a reasonable solution for their light lamps. In my practice I have found excellent old-fashioned models with great light, where the replacement of the lamps would cost less than 5 USD, but sometimes the costs can be more than 300 USD for a non-original bulb. So when you choose the light, pay attention to spare parts. My personal preference for office procedures is a portable LED light source. The price is less than 200 USD, but the light is strong enough to perform even laparoscopy (I have tried it ☺) . In the case with LED portable light you connect it directly to the scope and do not need a light cable, which must be replaced after few years of usage and the price of such is approximately like of the new LED light.

Monitor also depends on your preferences. Some companies stated that you need a medical monitor for office procedures. It is clear that your office is not an operating theatre, there are no gases. You do not need a high grade medical monitor, as long as you do not have a special medical monitor for you PC or laptop in your office. It will be really useful to connect all your machines to a switch device – you can have a picture of your ultrasound, colposcope and hysteroscope on one monitor on the wall, so the patient can see the procedures if she wants. Or she can even watch a movie on it. So from my point of view one HD TV monitor will do great for your office practice. But please, pay attention on the available connection interfaces of the TV. Usually some old model cameras have only analog or S-video output. In that case you would need to find suitable connectors between the camera and the monitor – all possible opportunities are available on the web. Also depending on PAL or NSCT system you can have problems with colors of the picture.

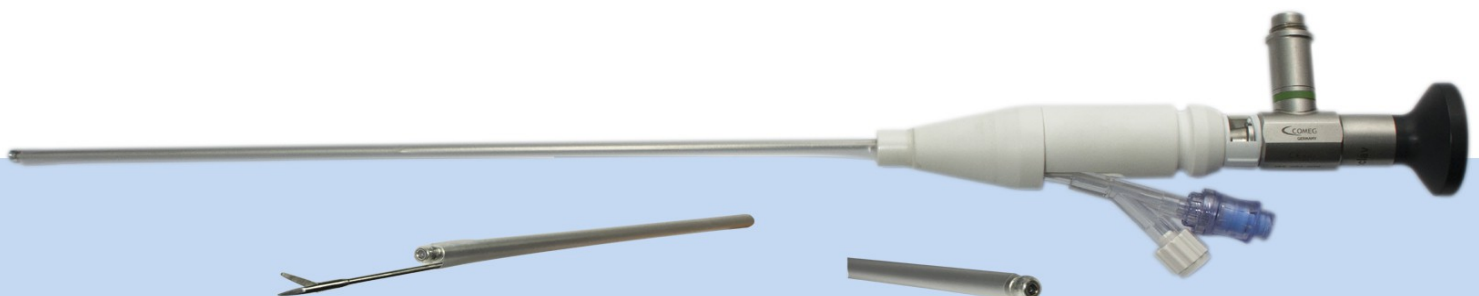
The distension media is important for visualization during the procedures. The most used media is the saline, as it is both cheap and safe. Usually office hysteroscopies are quick and you do not need to count deficit of the media, which must not exceed 2500 ml. If you decide to use an electronic pump, you will have stable pressure during the procedure, which can be changed accordingly to patient reactions of anxiety or pain. The prices for such pumps vary between 500 and 5000 USD for used and new one. Here you need to pay attention on the tubing sets for the pump. Every brand has a different one that is not compatible with another. The new pumps also come with integrated chip in it, it will prompt you to replace the tubing set after a few procedures, which can lead to unexpected costs. I started performing office hysteroscopy procedures with a 3-liter bag under a pressure with a cuff, which is pumped manually. The disadvantage is that you need one additional person to pump constantly, so you cannot rely on your nurse. For office purposes the easiest way is to put the distension bag on 120 cm above patient's position. With an appropriate diameter of the tube you can achieve sufficient pressure for diagnostic and even small operations procedures.

A recording device is essential as we need data for educational purposes and also to protect ourselves from possible patient prosecution after the procedures. Also it is better if the patient has her own copy of the operation – one picture talks more than 10 operative protocols. You can find very interesting things in cases another hysteroscopist found usual. The easiest way is to have a recording program on your laptop, with which you can connect your USB camera. In all other cases use external recording device. On the market there are plenty of them, with prices between 1000 and 5000 USD, as probably **MediCap of Mediacapture** is one of the best known. The cheapest option is an analog TV tuner with recording software, connected from your camera to a PC – its price is less than 20 USD. Also some doctors prefer to take pictures on a color printer, which is still an option, although a little old-fashioned one. Once again – when you try to combine and connect different devices, pay attention to the possible connections between them – analog, S-video, HDMI, RGB, composite etc.

Hysteroscope is really crucial for the successful office practice. There are a lot of systems on the market, but I think you have to keep in mind 2 magic words – oval shape and less than 5.5 mm. Oval shape of the sheath is anatomically acceptable and causes less pain. You can use it as a screw during the procedure and dilate the cervical canal in nulliparous or postmenopausal women. About the 5.5 mm – that is the cut-off of painless hysteroscope diameter. You can use Versascope with fiber optical 1.8 mm semi rigid body, with single use sheath with total diameter 3.2 mm. Or old Bettocchi system with 2.9 mm optics without outer sheath with total diameter of 4.2 mm. Or the new BIOH hysteroscope with small diameter, which cannot give you the inflow and outflow at the same time. Built-in Compact Office Hysteroscope of Richard Wolf has all advantages of office hysteroscopes. The only important thing to count in the two last hysteroscopes is that after every procedure the system must be sterilized. If your practice is too busy, but you plan to have mainly diagnostic procedures even a single use **Gynco of MedicalSwan Italia** sheath on 2.9 mm 30 or 0 degrees hysteroscope, with total diameter of 3.2 mm and working channel for 7 FR instrument is a solution. Just attention must be paid to the fact that the small diameter of Gynco cannot protect fully the optics which could cause damage to it during procedure. And if a bleeding occurs the visualization of the cavity is worse.

All of these systems have their advantages and disadvantages, but you must know them when you try to choose the perfect one for your practice. It is not necessary to discover the hot water, just ask the experts during workshops and congresses or even on discussion groups in Internet, everyone will share its experience and you will have enough information to take the right decision.

In brief I can summarize that everything depends on what you want and what kind of procedures you plan to perform, taking into account the number of patients and the type of financing /healthcare insurance, selfpayment/. All information discussed above is according to author's personal experience. Probably there are so many other good devices and equipment, and every doctor can find the best solution for himself. But the idea is that you need to face your desires what you want to do, to discuss your wishes with more people and experienced colleagues and accordingly to build your own "best office hysteroscopy system".





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HYSTEROSCOPY Editorial teaM

It is undoubtedly a great moment to grow up as gynecological endoscopist. Many things in our discipline are rapidly changing and we should be aware that the limits of our field are continuously expanding.

When I was still an ob/gyn resident, I had the great fortune to move the first steps in hysteroscopy with a great Tutor, Prof. Onofrio Triolo. He literally guided my hands using the hysteroscope both in the ambulatory setting and operating theatre, teaching me from the basic skills to the tips & tricks, encouraging me during the learning curve. Subsequently I moved to Ljubljana, a “temple” of gynecological surgery: Prof. Adolf Lukanović assigned me to the surgical team of reproduction, under the supervision of Dr. Helena Ban Frangež and Prof. Eda Bokal-Vrtačnik, who lead me to perform major laparoscopic surgeries and improve significantly my hysteroscopic skills. Finally, I started to work at the “Filippo Del Ponte” Hospital, University of Insubria (Varese, Italy) with Prof. Fabio Ghezzi: in this center, we are pursuing the excellence of minimally invasive surgery and pushing forward its current limits.

Young gynecological endoscopists should be aware that what is currently seen as “normal procedures”, was almost unimaginable few years ago. In this scenario, hysteroscopy is a brilliant example about how integrated technological developments and continuous research of new improvement of techniques lead us to tailor the best approach for our patients. These milestone changes were achieved step-by-step thanks to many brave, countercurrent and sometimes visionary Colleagues, which were able to see over the horizon and conjugate new views with evidence-based medicine.

In this years, a handful of dreamers continued what the “fathers” of our discipline had started in the past: we collected the best worldwide-recognized experts under the “Global Congress of Hysteroscopy”, an independent leading force representative of all the countries of the world, aimed to promote and standardize approaches and techniques.

Despite the goals achieved so far I truly think that we did not reach the limits of the technique: we should take advantage of the collaboration among different experts and, consequently, select the highest standards of care and crystalize them in publications and guidelines.

In this regard, I am very honored to be part of this wonderful team and I take the opportunity to wish all the young trainees to become great minimally invasive surgeons and follow the line traced by the “fathers” of our discipline. This is usually a long and windy road, for which you need good Tutors and patience. You may need to overcome your supposed limits, even facing off your fears: as the AC/DC were used to sing, *“it’s a long way to the top, if you wanna rock ‘n’ roll!”*.

Antonio Simone Laganà
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