HYSTEROSCOPY NEWSLETTER

The hysteroscope is the gynecologist's stethoscope. How can we practice modern gynecology without it? Diagnostic office hysteroscopy permits full visualization of the endometrial cavity, tubal ostia, endocervix and is critical in diagnosing focal lesions that are missed with blind or non-directed endometrial sampling. Increasingly, operative hysteroscopy both in the office and ambulatory center permit safe, effective, and minimally invasive surgery for an array of intrauterine pathology.

In the realm of minimally invasive options in gynecologic surgery and treatment, hysteroscopy remains an underutilized tool in the arsenal of the MIGS surgeon. Those of you who know me, know that educating my peers on the diagnostic and therapeutic power of hysteroscopic surgery and the benefits it has for our patients has been a foundation of my career for decades. Because of this, I couldn't be more pleased to personally invite you to the first AAGL Global Hysteroscopy Summit, a program that was unanimously approved by the AAGL Board of Directors. The Summit will be held in one of my favorite Canadian cities, Toronto, July 27-28, 2018.

I'm proud to be joined by hysteroscopic visionaries, innovators, and enthusiasts who will present novel new indications, discuss new technology, and have friendly debates. But it will also be my honor to thank a legend and pioneer, a humble leader who stoked and nurtured my initial interest in hysteroscopy, and whose early focus lead to an increased adoption of office and operative hysteroscopy worldwide – Dr. Franklin Loffer. His infectious energy and zeal lead him to teach thousands of individuals just like you and me. Join us as we celebrate his years of leadership, innovation, and service to the AAGL family.

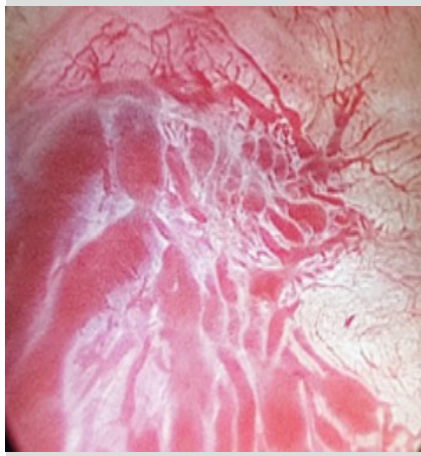
The Global Hysteroscopy Summit will be a more intimate gathering than our Annual Global Congress, affording you the opportunity to meet all the speakers and have in-depth conversations. As Chair of the meeting, I'd like to hear your thoughts, ideas, and suggestions to help sustain the current momentum to increase the scope of hysteroscopy in your community.

We are confident that this will be the most educational hysteroscopy conference that you have attended. It will be a dynamic compendium to improve the hysteroscopic surgical care, improve patient outcomes, and enhance patient safety.

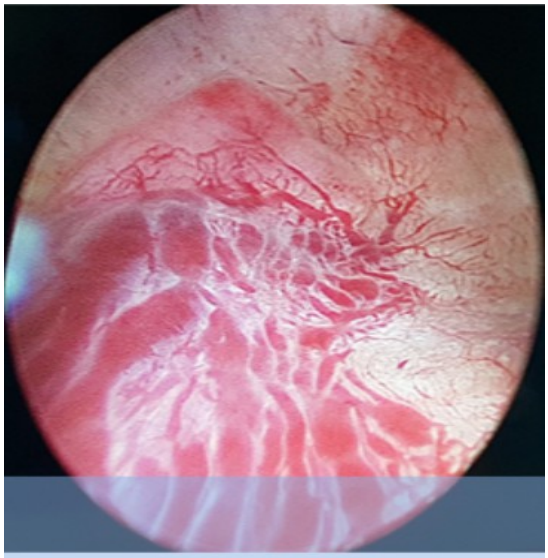
If you are interested in attending, please click the link below to review the program and sign up.

https://toronto.aagl.org

INSIDE THIS ISSUE



HYSTEROSCOPY PICTURES



Detailed view of an uterine arteriovenous malformation

Pulsatile ill-defined and highly vascularized mass

Arteriovenous fistulas or uterine arteriovenous malformation constitute a very rare and potentially serious pathology due to the abnormal bleeding that originates in the anomalous communications between arteries and veins

They may be congenital or acquired, we think that the AV fistula term should be reserved for acquired cases and the AV malformation term for the congenital form. Congenital cases are rare, being the consequence of a defect of embryological development, and usually affect adjacent organs and structures. Classically, acquired fistulas have been correlated to chorio-placental pathology such as molar pregnancy, choriocarcinoma or extensive or focal placental accreta and previous uterine surgery. In cases in which this entity is associated with previous uterine surgery, the vast majority of are related to previous uterine curettage and is assumed to form as a result of trauma.

The diagnosis is usually made by the symptoms and ultrasound, with arteriography being the gold standard for the definitive diagnosis of AV fistulas. Clinical symptoms are usually associated with persistent vaginal bleeding after curettage with or without abdominal pain. This abnormal bleeding can present from days to years after the curettage.

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

INTERVIEW WITH...

The gynecological endoscopic surgery in Latin America owes much to Dr. R. Alfonso Arias. A great doctor who has devoted his professional life to caring for women

R. Alfonso Arias Alvarez

Treasurer of the Executive Committee of FLASOG

Past President of the Society of Obstetrics and Gynecology of Venezuela

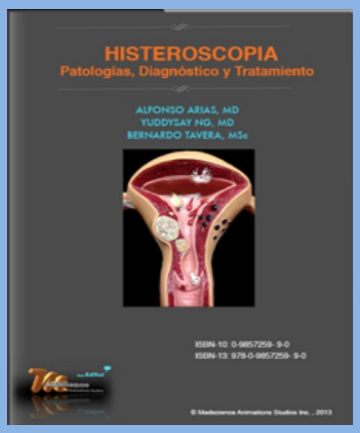
How were your first steps in the world of Hysteroscopy? Hysteroscopy was something that attracted you from the beginning of your days as a gynecologist.

Yes, it attracted me from the first day. Since 1980 when I started activities at the Dexeus Institute (Barcelona) with Ramón Labastida, who used an 8 mm diagnostic Lindenman under anesthesia in the operating room. With Ramón I experienced the first major changes of this technique, so in the year 1982 he sent me to Florence with Luca Mencaglia to see the changes that Luca and Hamou had introduced and we began to apply them in the Dexeus office. Also, in 1994 due to my interest about the development of new instruments and techniques Dr Labastida introduced me to S. Bettocchi, with whom I shared his first concerns about technique without speculum and also cultivated a great friendship to this day. In short, I have been lucky enough to train, work and grow together with the great pioneers and sometimes I have to live in advance the transcendental changes of this beautiful technique.

"Science is always in progress"

In 1992 you published an article entitled "Hysteroscopy, easy and low-cost technique". Are you still thinking the same?

Yes, and now it is much more valid than 26 years ago. My first postgraduate degree was in Medical Management and Statistics (1972-1974) so when practicing Gynecology, I tried to apply those concepts in clinical practice. So, seeing that the resistance to spread Hysteroscopy was the "high cost of equipment", I decided to do this research at the Central University of Venezuela and showed that hysteroscopy was cost effective just by decreasing the number of blind curettage performed in cases of abnormal uterine bleeding the cost of the equipment was compensated. Currently, in-office surgery has grown a lot avoiding the costs and risks of the OR.



This application presents a detailed description of the different pathologies associated with the cervical canal and uterine cavity , that can be diagnosed and resolved by hysteroscopy, either by vag-hysteroscopy in-office consultation or operating room, and resectoscopy in the operating room. For each pathology, there is an anatomic 3D visualization as well as a detailed explanation of the resolution. A unique three-dimensional animation with the latest visualization tools shows textures and visual features, as well as step by step explanation of the resolution.

Which of the latest advances in material or devices has surprised you the most?

There are several very interesting things: The Essure is a breakthrough in contraception and Infertility with tubal pathology, but its use has now been restricted. The bipolar resectoscope of any diameter maintains a great validity in the myomectomy, for me it is essential to have it available. The latest minimized resectoscopes in diameter (15-18 Fr) and dual (simultaneous mono and bipolar) are very useful allowing to perform complex procedures in the office. As for the tower, the compact system of camera, light, screen and video recording allows excellent documentation; I highly recommend the Telepack.

You have always been very active in courses and workshops. To what extent do you see the importance of training courses in Hysteroscopy?

It is the most important thing and must be performed by every provider before performing any hysteroscopic surgical procedure. A good course must have: 1. Solid theory. 2. Good practice in realistic trainer, with uteruses and pathologies of animal tissue. 3. Practice in live patients monitored by an expert in Hysteroscopy, who guides and supervises the activity.

Until 2002 I gave multiple courses with theory and live demonstration, but they had very little attendance. In 2003, together with Mencaglia and Cavalcanti, we created courses focusing on hands-on participation both in animal and real patients, achieving a great interest of the Hysteroscopy in Latin America. Now we have also given courses in many other Latin American countries such as Ecuador, Bolivia, Mexico, Colombia, to name a few.

"There is nothing permanent except change"

Has Hysteroscopy reached its limit?

No. Science is always in progress, it continues to grow in unexpected ways. My Professor José M. Carrera always reminded us of Heraclio's phrase from Ephesus: "There is nothing permanent except change". At this moment in-office procedures and the use of Laser in hysteroscopy are the next things to develop.

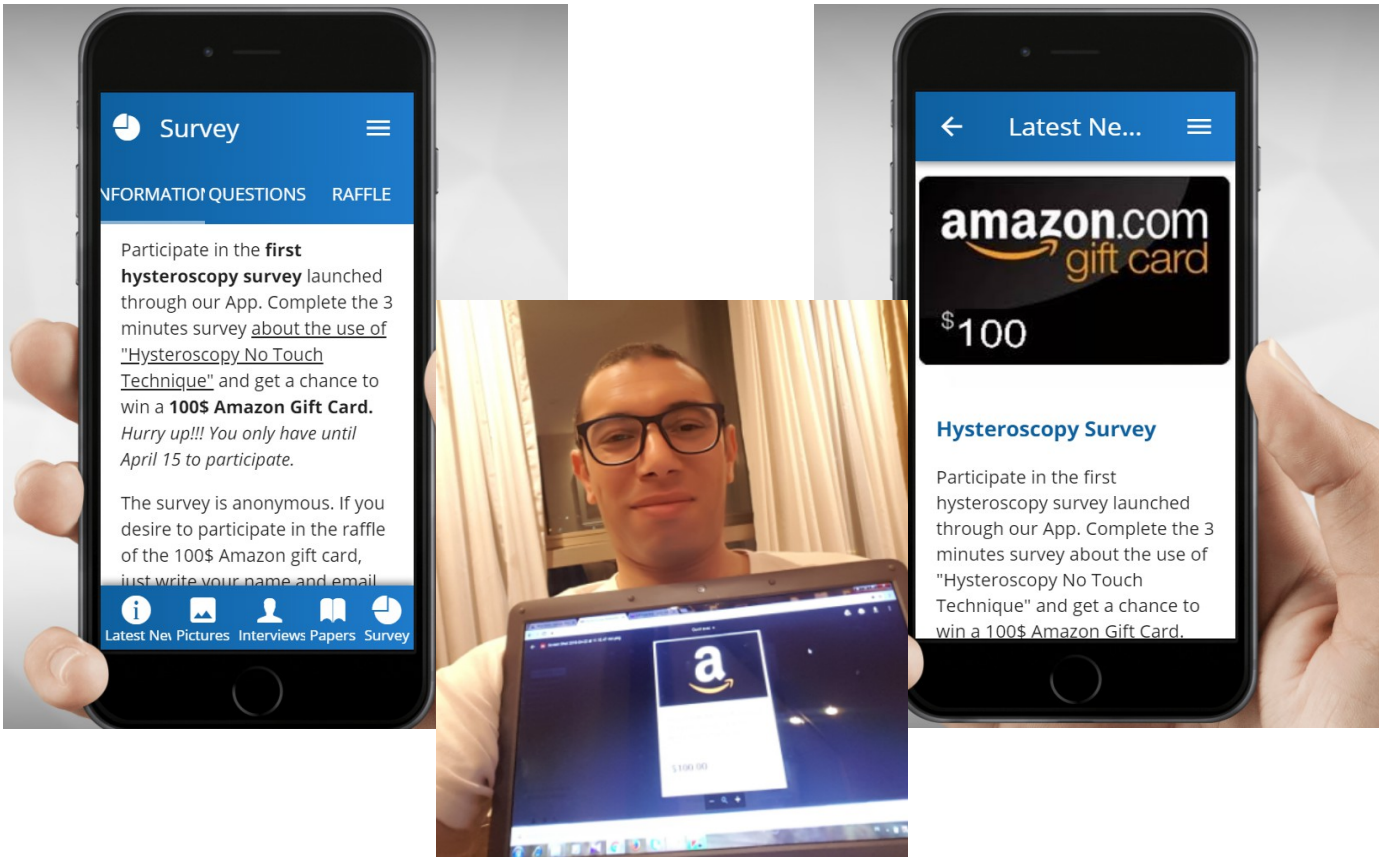
Do you have any advice for the young physician that is starting out in the world of gynecologic minimally invasive surgery?

To obtain formal training attending qualified courses that meet the parameters mentioned above. That is to say that they have:

1. Excellent theory background.
2. Provide advanced and supervised practice in realistic trainer.
3. Teaching about the detail of each instrument and the reason for its design.
4. Live practice supervised by an expert in surgery and teaching, but always after having completed the items 1,2,3.

HYSTERO Projects

Hysteroscopy Survey



On behalf of the Hysteroscopy Newsletter App we want to congratulate to **Dr. Adel Sedrati** on being the winner of our fist contest.

We thank all of you so much for your participation.
If you want to be updated in minimally invasive ginecological surgery just download "Hysteroscopy News" App

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

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

BASIC

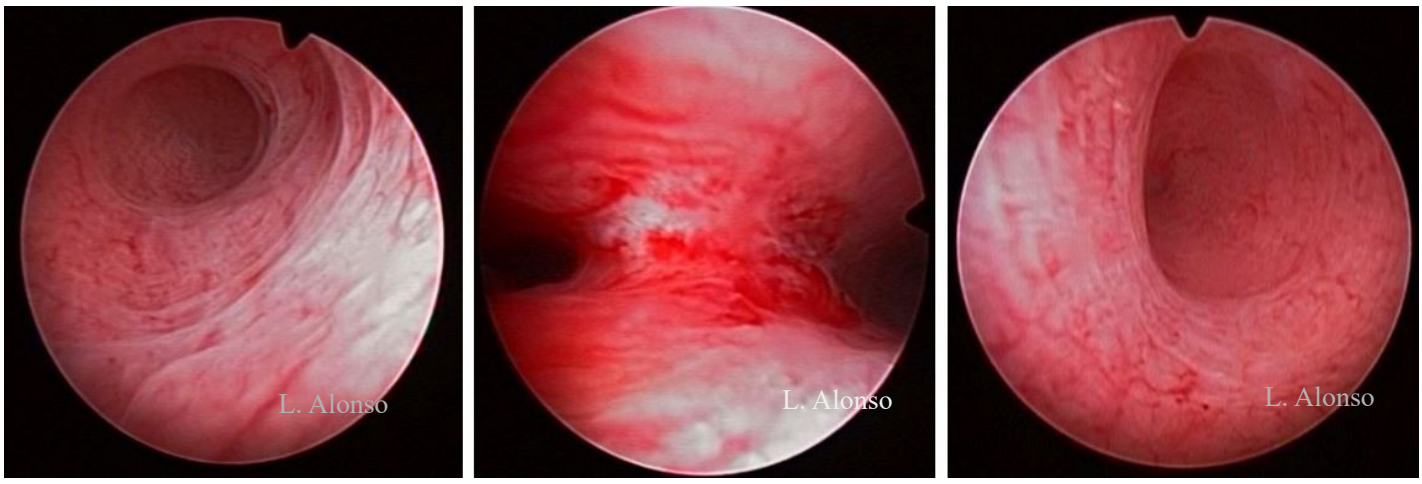
HYSTEROSCOPY

SEPTATE UTERUS

Luis Alonso. Centro Gutenberg. Málaga. Spain

Septate uteri continue to be a challenge for the hysteroscopist. This type of uterine malformation occurs as a result of failure in the reabsorption of the fusion area of the Müllerian ducts. Septate uterus is associated with poor reproductive outcomes, including high rates of miscarriage and preterm birth. Hysteroscopic metroplasty is considered the Gold Standard treatment of this condition, a procedure that is in most cases simple and safe to perform and reduces the rates of adverse obstetric outcomes related to the presence of the septum.

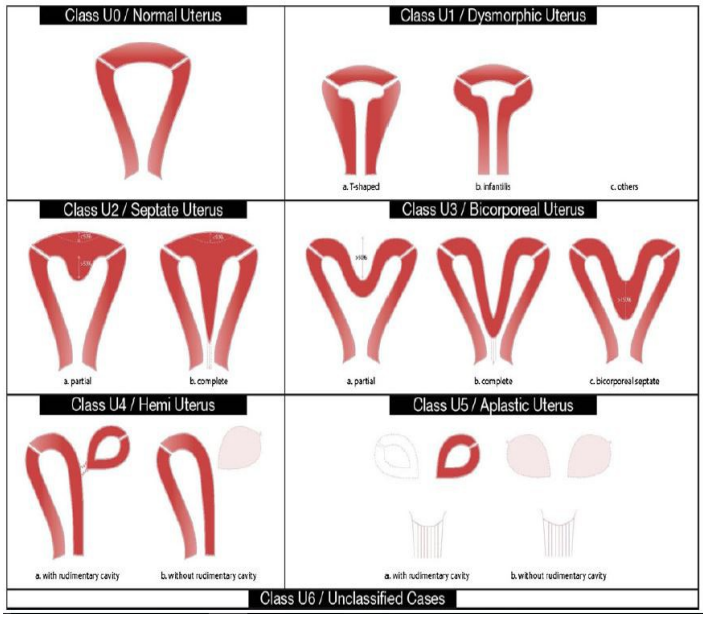
The incidence of uterine malformations in the general population remains unknown, this is due to the fact that a large portion of these women are asymptomatic, also, the absence of standardization in the diagnosis, affects the results of the different studies. Data from the Chang et al [1] on 94 observational studies that included a total of 89,861 women found a prevalence of uterine malformation of 5.5% in the general population, 8.0% in the infertile group, 13.3 % in those with a history of spontaneous abortions and 24.5% in women with history of spontaneous abortion and infertility. The most frequently reported malformation was arcuate uterus whereas septate uterus was the most frequent in the infertile patient.



There are few studies on the histological structure of the uterine septum. March's phrase "the septum is a fibroelastic tissue" remains among gynecologists and there is a common belief that the septum is composed of tissue with little amount of muscular fibers and poorly vascularized. Sparac et al studied the histology of the septum and concluded that it is not composed of an avascular connective tissue, but of fibromuscular tissue with a predominance of connective tissue in 72.3% of the cases and predominantly muscle tissue in 27, 6% [3]. The vascularization of this structure has also been studied by power Doppler by Kupesic [4] who found vascularization in 71.22% of the patients, concluding that the majority of the septa are vascularized.

The septate uterus has been classically divided into two types, complete and partial. The complete septate uterus is the one in which the septum reaches the internal cervical os (ICO) while the partial septum does not reach up to the cervix.

The classification of the AFS classified them as class V (Va the complete and Vb the partial) Recently the ESGE and the ESHRE have established a new classification system. In this system septate uteri are classified as class U2, (U2a the partial and U2b the complete)



Rates of miscarriage associated with the presence of the septum of up to 60% have been published [4]. The mechanism by which the septum produces abortion is unclear and several theories have been proposed to explain this fact. The most accepted is in relation to a theoretical decrease in vascularization of the septum that can affect embryoimplantation. Other authors suggest that the cause of spontaneous abortions could be related to an uncoordinated contractility of the muscle fibers of the septum [5]

The correlation between septate uterus and preterm birth is controversial. Different studies estimate the rate of premature birth at 14.5%. There are several factors that could be related, such as the decrease in size of the uterine cavity, the increase of intrauterine pressure during pregnancy and the existence of an altered ratio of muscle fibers / connective fibers at the cervical level of women with uterine malformation. [6]

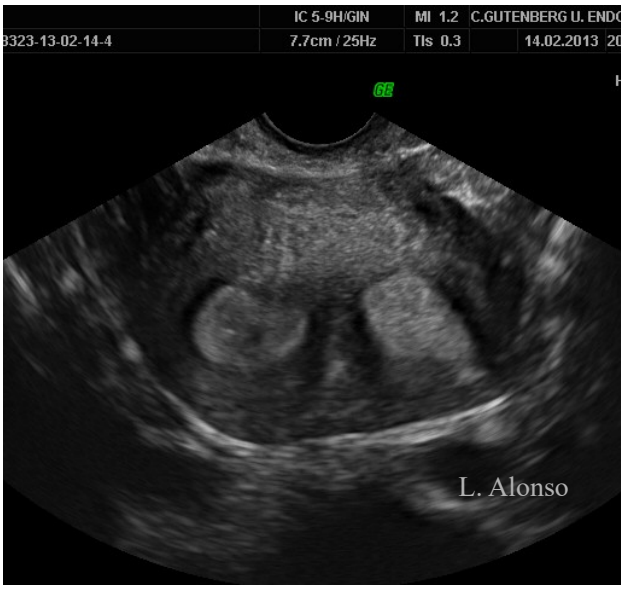
Regarding the relationship between the uterine septum and infertility, several studies suggest that women with uterine septum and infertility, in which there is no other factor, could benefit from hysteroscopic metroplasty. Pabuccu published a prospective observational study of reproductive outcomes after metroplasty in women with uterine septum and infertility and found pregnancy rates of 41% with live birth rates of 29.5%. [7]

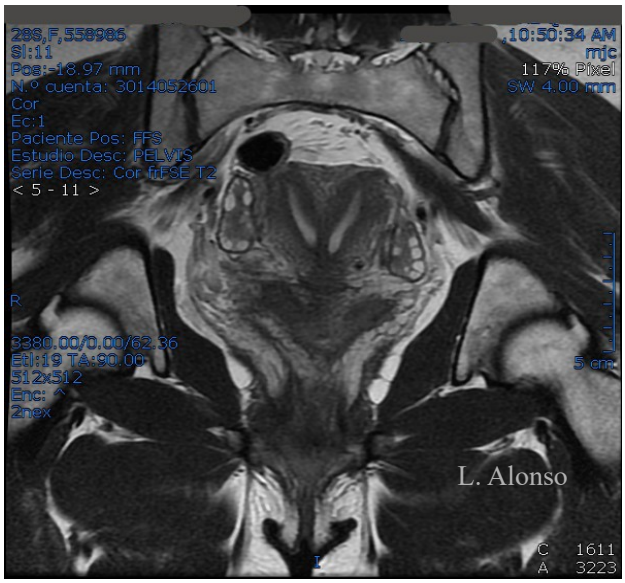
An accurate diagnosis is essential to propose the right surgical treatment. In the case of the septate uterus, an accurate assessment of both external and internal uterine morphology is essential. The main points of the diagnosis of the septal uterus are to differentiate between septum and subseptum (complete septum vs partial septum) and to determine the presence of an indentation at the uterine fundus of the uterus.

Hysterosalpingography offers information about the morphology of the uterine cavity. In the case of the septate uterus, it shows two small symmetric endometrial cavities. Usually the separation angle of the two cavities in less than 75 ° in the case of the septate uterus, although this is not an adequate method to differentiate between the septate and bicornuate uterus

L. Alonso

Ultrasound is an important diagnostic tool for the diagnosis of this pathology since it offers information on the morphology of the uterine cavity, on the external uterine contour and on the depth and vascularization of the septum. The 2D ultrasound is a suitable method for the diagnosis of uterine malformations, although its main limitation consists of the impossibility to obtain a coronal view of the uterus. It has been estimated that 2D ultrasound has a diagnostic accuracy in the case of uterine malformations of 80.65% [8]. Sonohysterography, when using liquid medium to distend the uterine cavity, improves the diagnosis with a sensitivity and specificity rate of 93% and 99% respectively. [9]





The 3D ultrasound offers an accurate reconstruction of the uterine morphology, both of the cavity and the external contour. The accuracy of 3D ultrasound in the diagnosis is 91.6% when evaluating the external contour and 100% in the study of the uterine cavity, having diagnostic results similar to those of MRI. [10]

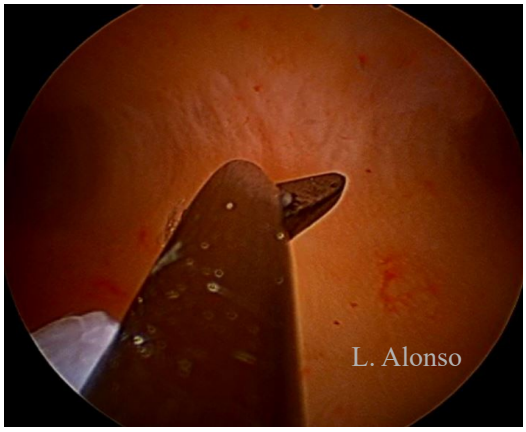
MRI also offers precise information on the cavity and uterine contour. Classically it is awarded diagnostic accuracy of 100%, figures that are similar to those achieved with the association of hysteroscopy plus laparoscopy, which is classically considered the "gold standard" technique for the diagnosis of uterine malformations, although the latter combination, being invasive, is not recommended as a first-line diagnostic modality.

The need for a surgical correction of the uterine septum is dictated by the obstetric history of the patient than by the presence of the septum, the main indication of surgical correction being poor obstetric history. There is still controversy as to when a septate uterus should be corrected, while some authors recommend surgical correction only in cases with poor reproductive outcomes, others recommend prophylactic hysteroscopic metroplasty given the poor obstetric results to which this malformation is associated.

The main indication is in patients with recurrent pregnancy loss since it has been observed that surgical correction improves reproductive outcomes in these patients. In patients with septate uterus with infertility, the value of metroplasty is still a matter of debate. A prospective study by Mollo et al reported that the chances of conceiving increased after correction of the septum and today it is accepted that hysteroscopic metroplasty increases pregnancy rates in women with primary infertility. [11]

In patients who are going to undergo assisted reproduction procedures, De Angelis demonstrated the beneficial effects of metroplasty before the reproduction treatment, concluding that a hysteroscopic metroplasty should be recommended to all patients with septate uterus before IVF to improve success rate.

Surgical treatment has evolved from the techniques of Tompkins or Jones through the abdominal route to the current hysteroscopic approach. It was in 1974 when Edstrom first described the resection of a uterine septum guided by endoscopy [12]. This was the starting point for what is the current metroplasty.



Hysteroscopic metroplasty consists of a transverse incision of the uterine septum and a real resection of the septum. This incision should be made just in the middle of it, equidistant from the anterior and posterior uterine walls. The tubal ostia are of great help to maintain the correct plane and orientation and to avoid healthy myometrium injury.

Two different techniques have been described when incising the septum, the thinning technique and the shortening technique. The technique of thinning consists of making longitudinal incisions on the sides of the septum, from the bottom to the vertex of the septum, reducing the width of the septum and converting the initial septum into a tissue remnant that can be incised laterally more easily. The shortening technique incises the septum transversely from the vertex towards the fundus. This incision in the midline retracts residual tissue to the anterior and posterior uterine surfaces.

One of the key points of this surgery is deciding when to finish the metroplasty. The classic recommendation is to end the operation when both ostium are seen in a panoramic view and when the tip of the endoscope can move freely from one ostium to the other. After Fedele's study, it is accepted that a residual septum of less than 1 cm deep measured by ultrasound does not affect reproductive outcomes. [13]

Hysteroscopic metroplasty has been performed classically with the resectoscope with mono or bipolar electrosurgery, using a straight handle or the Collins handle, although it can be done with scissors, bipolar electrode, with the new miniresectocopes or with laser. There are several works that compare the results of the technique according to the instrument used, generally there are no significant differences.

To make the procedure as simple as possible, it is important to perform the surgery with the smallest possible endometrial thickness. Most authors coincide in pointing out the initial proliferative phase as the best time to perform this surgery. Pharmacological preparation of the endometrium can be achieved with the use of GnRH analogues, oral contraceptives, danazol or progestogens. The goal of these treatments is to get a thin endometrium.

We conclude that resection of the uterine septum significantly decreases the rates of pregnancy loss and preterm birth, as well as improving fertility in those women with septate uterus and infertility of unknown origin. Hysteroscopic metroplasty is an effective and safe treatment with low complication rates when performed by expert after an accurate diagnosis.

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Hysteroscopy Conundrums

Miniresectoscopes

Recently, there were a debate in our whatsapp group about different instruments used to perform intrauterine surgery. Some colleagues selected the miniresectoscopes as the first option. It is an easy to use instrument that allow us to treat most of the pathology.
What do you think about? Do you have a miniresectoscope? have you used it?

adel sedrati Dear Luis Alonso Pacheco good morning my friend :
I d'ont have a mini resectoscope, I had a chance to try it several times .
I belive that withe this instrument we can do the most common intrauterine pathology withe mono bipolar or cold loop .
Yes i gree with you

Dejar de recomendar | Tú ▪▪▪ 3semanas

José Jiménez I beleive that its the best instrument in hysteroscopy. I use Prince, bipolar minireceptoscope by Wolf. Its true that the intervention last more time, but while use it, you learn to Work more quickly. In other hand, you have a very easy … **Mostrar más**

Dejar de recomendar | Tú ▪▪▪ 3semanas

Parul Kotdawala Can someone define mini-resectoscope?! Is the scope mini, or the resectoscope is mini?!

I use a bipolar resectoscope with 2.9 mm scope. It is good for smaller pathologies. But I have had to switch to regular monopolar resectoscope (4 mm scope) in some cases, due to logistic reasons of saline muddying, slower cautery, smaller tissue effects! **Mostrar menos**

Recomendar ▪▪▪ 3semanas

Gubbini Giampietro Dear Luis, since 2009 I use the miniresector of 16 fr and I use it in 80% of pathologies. It represents the evolution of mini-invasive surgery. Now the possibility of having a 15 fr ellipse miniresector mono/bipolar increases the possibilities of this outpatient surgery.

Dejar de recomendar | 3 y tú ··· 3semanas

Alicia Ubeda Yes, we've got two miniresectoscopes, as we're seven endoscopists in our group in Bracelona. It's the best option because of vesatility in one instrument and cost per procedure.
Farafic effect is lower than bipolar electrode's.

Recomendar ··· 3semanas

Luis Alonso Pacheco Dear Friends, I`m agree with G. Gubbini. With the 16fr miniresectoscope you can treat 80% of pathologies you face. Is is a great tool, easy to use (if you are used to the classical resectoscope) and versatile. In cases of "Big " pathologies.... bigger instruments are needed.

··· 1 día

Attilio Di Spiezio Sardo I have used first the miniresectoscope developed by Gubbini and I have to admit that it made my office surgery shorter and easier. The same good feelings I had with the miniresectoscope developed by Storz. They allow to overcome the main limit of office surgery: TIME!!!!

Dejar de recomendar | 1 y tú ··· 5 días

Rubèn Baltà 3 semanas ···
Especialista en Ginecología y Obstetricia

I've used it some many times and it's very useful in nulliparous women when you have the suspicious of a polyp or synechiae

Recomendar Responder

Adriana Elisa de M. M Pereira 4 semanas ···
Ginecologista e Obstetra - TEGO pela FEBRASGO- Endoscopia Ginecol...

I think it' amazing! Unfortunatelly I still don't have one to work, but from what I have seen from our coleagues on videos, made me fell that miniresectoscopes "came to stay" . I seens to take a very important place to treat easily and with low risks of bad outcomes most of intracavitary pathology.

Recomendar Responder

Look for us: hysteroscopy group in Linked In

TALKING ABOUT

Prevention of Intrauterine Adhesions

Rubèn Baltà i Arandes Ob/Gyn Hospital Juaneda Muro Spain

Intrauterine adhesions (IUA) are bands of fibrous tissue that form inside the uterine cavity, often as a result of intrauterine procedures. The severity spectrum of IUA varies from minimal to complete obliteration of the uterine cavity. IUA are generally treated with hysteroscopic resection followed by mechanical or hormonal treatments. One of the greatest challenges in operative hysteroscopy is to prevent adhesions reformation

Currently, almost 90% of all IUA are associated with postpartum or postabortion dilatation and curettage (Nappi 2007). With the exception of genital tuberculosis (Deans 2010), the role of infection in the formation of IUA remains controversial.

The repair mechanisms of tissues in human endometrium are poorly understood (Revaux 2008) despite several hypotheses about the origin of endometrial cells. The duration of the healing process of the endometrium depends on the type of pathology present. However, it has been described that the time required for complete recovery of the endometrium range from one month after a polypectomy to three months after submucosal myomectomy (Yang 2013). IUA are associated to poor reproductive outcomes. This is partly due to infertility reported up to 43% (922/2151 women) according to Schenker 1982. Also, recurrent pregnancy loss, which ranges between 5% and 39% in women with IUA (Kodaman 2007), and obstetric complications such as abnormal placentation, increased risks of preterm birth, uterine rupture and peripartum hysterectomy.

ETIOLOGY AND PREVALENCE

The presence of IUA is estimated to be up to 1.5% in women with infertility and up to 40% in women after evacuation of retained placental tissue or repeated curettage due to abortion. Uterine curettage performed between 2-4 weeks postpartum appears to be the greatest risk factor to produce intrauterine adhesions, which can be aggravated by subsequent periods of induced hypoestrogenism if the patient will breastfeed. Although there are no recent studies, based on different published articles, the prevalence of intrauterine adhesions found during the hysteroscopy for different reasons are:

Condition	Prevalence %
Secondary Amenorrhea	2.6
Postpartum curettage	23.8
Multiple curettage	32
Infertility	7
Recurrent pregnancy loss	23.2
Diagnostic hysteroscopy	2.2

Source: http//www.histeroscopia.es/ManejodeAsherman.htm

There seems to be a predisposition for the development of IUA in some women. These constitutional factors can also explain the different responses to treatment and why some patients are predisposed to have recurrences and others not.

PRIMARY PREVENTION

The European Gynecological Endoscopy Society (ESGE) and the American Association of Laparoscopic Gynecologists (AAGL) recognize that the risk of intrauterine adhesion formation is reduced in the following circumstances:

- Procedures confined to the endometrium compared to those involving the myometrium or opposite uterine surface.
- Minimizing the use of electrocautery inside the uterine cavity
- Procedures with less endometrial trauma such as polypectomy compared to resection of multiple submucosal myomas.

It is recommended that in order to avoid intrauterine adhesion formation, the surgical procedures should be limited to achieve the goal with minimal damage. Long term data on the outcome of these surgical techniques are limited, especially regarding pregnancy rates and live births. The following techniques have been associated with reduction of postoperative intrauterine adhesion formation, but long-term data is lacking.

The use of semisolid adhesion barriers (gels) to decrease IUAs formation was proposed to be applied after procedures that will damage the endometrium reducing the risk of adhesions formation.

Subsequently, a study [10] that compared the efficacy of hyaluronic acid with no treatment for the prevention of adhesions after dilation and suction curettage for missed abortion. The group of patients in whom gel was applied had a reduction of almost 60% of adhesion formation.

SECONDARY PREVENTION

The main objective of this is to avoid or reduce the risk of adhesion formation and promote endometrial healing. The normal growth of the endometrium after hysteroscopic surgery, curettage or hysteroscopic intrauterine adhesiolysis. However, the scientific evidence about intrauterine adhesion prevention is scarce [18-20].

In a meta-analysis comparing various types of anti-adhesion treatments versus placebo or no treatment, the authors concluded that "The clinical effectiveness of the treatments to improve reproductive outcomes or to reduce intrauterine adhesion formation after operative hysteroscopy in subfertile women remains uncertain "[19]. In another meta-analysis [1,17], anti-adhesion therapy has been associated with lower recurrence of intrauterine adhesions in "second-look" hysteroscopy (OR 0.36, 95% CI 0.20-0.64, 7 studies, 528 women).

PREVENTIVE TREATMENT OPTIONS

There are several methods that can be used individually or combined:

1- Estrogen therapy: The goal of providing estrogen is to promote the regrowth of the endometrium on the surface that has been damaged. However, there are no recommendations based on evidence about the optimal formulation, dosage or duration of treatment, partly because studies are lacking that compare different estrogen regimens, isolated from other therapies for the prevention of adhesions.

Taskin O. et al. 2000[21] – Estrogen in combination with other therapies	It seemed to be beneficial, but the range of results was broad and meta-analysis was not performed due to variations in study designs
Di Spezio et al. 2008[20]	He could not draw conclusions regarding the use of postoperative estrogens due to treatment combinations
March et al. 2011[18] – Compared estrogen to placebo for the prevention of adhesion formation after septoplasty	*No benefit found*
Al-Inany H. 2001[19] – Estrogen therapy vs placebo	*No difference between groups*
Cochrane review 2017 - Anti-adhesion therapy following operative hysteroscopy for treatment of female subfertility	*Not enough evidence (Roy 2014)*

2- Intrauterine catheter: Catheters can be inserted (eg, a pediatric bladder catheter size 8 with a 5 cc balloon or a Malecot catheter) into the uterine cavity immediately after lysis of adhesion with the aim to prevent the contact of opposite surface.

Yang et al. 2008[22] – Intrauterine Foley Catheter vs IUD	Reported a higher return to normal menstruation as well as less need for reoperation in patients having a foley catheter postop vs patients having IUDS inserted
Mazzon et al. 2014[23]	The adhesion formation at the second look hysteroscopy was the lowest in patients who had foley catheter, followed by IUD and then hyaluronic acid gel
Cochrane review 2017 - Anti-adhesion therapy following operative hysteroscopy for treatment of female subfertility	*There is not enough evidence (Lin 2015).*

3- Intrauterine catheter with hormonal therapy.

Revisión Cochrane 2017 Anti-adhesion therapy following operative hysteroscopy for treatment of female subfertility	There is not enough evidence (Vercellini 1989).

4- Repeat "second-look" hysteroscopy: A follow- up hysteroscopy can be performed to evaluate the recurrence of the adhesion and allow resection if remodeling has occurred. This second hysteroscopy is commonly performed at about three months after the initial adhesiolysis procedure, although the use of serial hysteroscopic procedures at shorter intervals has also been described [1,24-26]. The hysteroscopies in series consit on performing a diagnostic in office hysteroscopy between 7 and 14 days after the initial surgery. In that brief period of time, if there is any adhesions formation, it will be filmy and easily removed. This approach is usually very well tolerated and usually requires up to 3 consecutive hysteroscopies in some cases.

Hooker et al. 2016[13] - Evaluated performing serial hysteroscopic procedures until no more adhesion formation	92 % (22/24) of the patients had les IUA, 95 % (18/19) return to normal menses and 46 % (7/15) of the patients desiring pregnancy were able to conceive
The American Fertility Society. Fertil Steril 1988; 49:944.[27] – Randomized patients with severe adhesions to repeated hysteroscopy one week after the initial procedure compared to no intervention followed by second look hysteroscopy 2 months after the initial procedure.	*Both groups had an IUD inserted and estrogen therapy after the initial procedure. The group having short interval follow up hysteroscopy had less IUA (11 Vs 83%). Although pregnancy rates were similar (47 vs 30%), there was a trend for achieving earlier pregnancies in patients undergoing short interval hysteroscopy f/u.*

5- Intrauterine gel: both hyaluronic acid gel and sodium carboxymethyl cellulose gel of polyethylene oxide seem to have reduced the formation of adhesions again, but its impact on subsequent pregnancy and live birth rates is unknown [1,18,20].

Sharma et al. 2008[28] – Hyaluronic Acid Gel postop Vs no intervention after hysteroscopic adhesiolysis	Reported a lower rate of adhesions in the second-look hysteroscopy at 3 months (14 versus 32%)
March CM. 2011[18]	A metaanalysis concluded that gel barriers have a role in preventing IUA formation, another meta-analysis reported that a definite conclusion could not be reached because of the heterogeneity of the study designs and the lack of reproducibility of the results of the study by a research group
Cochrane review 2017 - Anti-adhesion therapy following operative hysteroscopy for treatment of female subfertility	Based on data obtained from 5 studies (Acunzo 2003; De Iaco 2003; Di Spiezio Sardo 2011; Do 2005; Guida 2004), the use of intrauterine gel decrease IUA formation found at the second look hysteroscopy compared with no treatment or placebo. (OR 0.37, 95% IC 0.2)

6- Expectant management: an option after adhesiolysis is not to perform any adhesion formation prophylactic treatment. Two small studies that evaluated women after adhesiolysis without postoperative treatment reported inconsistent results [29,30]

7-Therapies in development: drugs that improve endometrial vascular flow and Stem cell therapy are potential treatments for the prevention of adhesions. However, data is limited, and these treatments are only offered as part research studies [1]. While preliminary studies have suggested that the treatment with endometrial platelet-rich plasma can reduce the expression of the pro-inflammatory gene.

OPINION OF THE AUTHORS OF THIS REVIEW

"Intrauterine adhesions: Treatment and prevention" published in UpToDate, 2017. Based on the available data, the authors opt for a hormonal treatment with estrogen for 30 days after surgery (2.5 mg of conjugated equine estrogens or 4 mg of oral estradiol BID), with 10 days of progesterone (10 mg of medroxyprogesterone or 2.5 mg oral norethindrone acetate) added on days 21-30 along with the placement of a pediatric bladder catheter into the uterine cavity (the balloon of the catheter is filled with 2.3mL of saline and removed 7-10 days after placement with prophylactic doxycycline 100mg /12h for 10 days. For patients with severe adhesions at the time of the initial hysteroscopic surgery, we performed a "Second-look" hysteroscopy after the first period of estrogenic deprivation to remove any adhesion that could had been formed

CONCLUSION

There is great controversy regarding prevention of intrauterine adhesion formation after surgical hysteroscopy or other procedure that may affect the uterine cavity. Some of the opinions are based on expert opinion. Perhaps the recommendation to be drawn from this review is that if we perform a procedure that affects the endometrial cavity, we should give a treatment based on estrogen with or without progesterone, or to use an intrauterine gel. Maybe an option to consider for future studies will be the application of platelet-rich plasma intrauterine or other growth factors at the endometrial level.

RECOMMENDED REVIEWS

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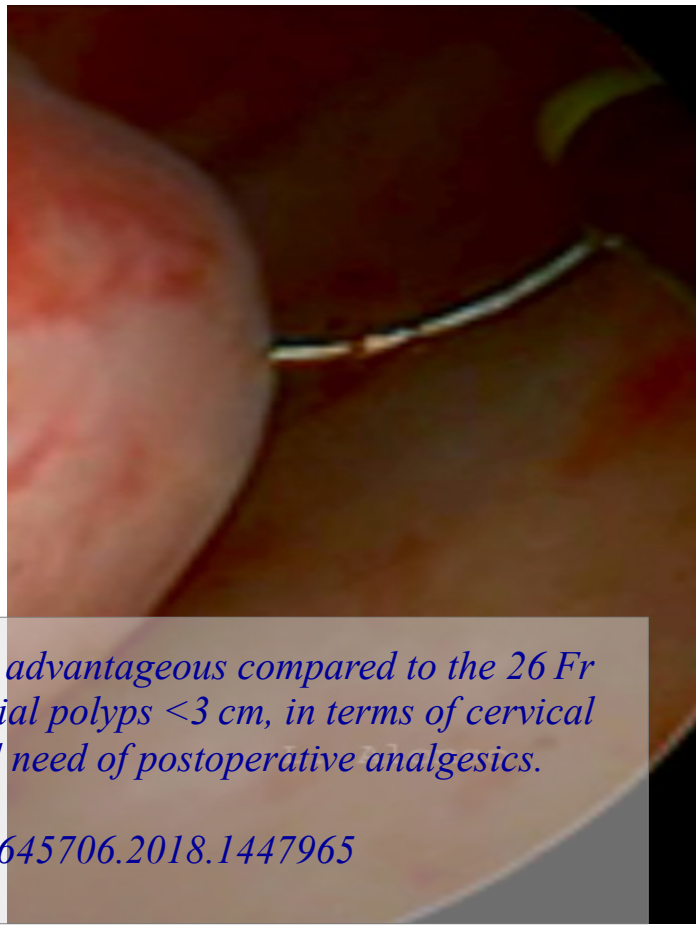
DID YOU KNOW...?

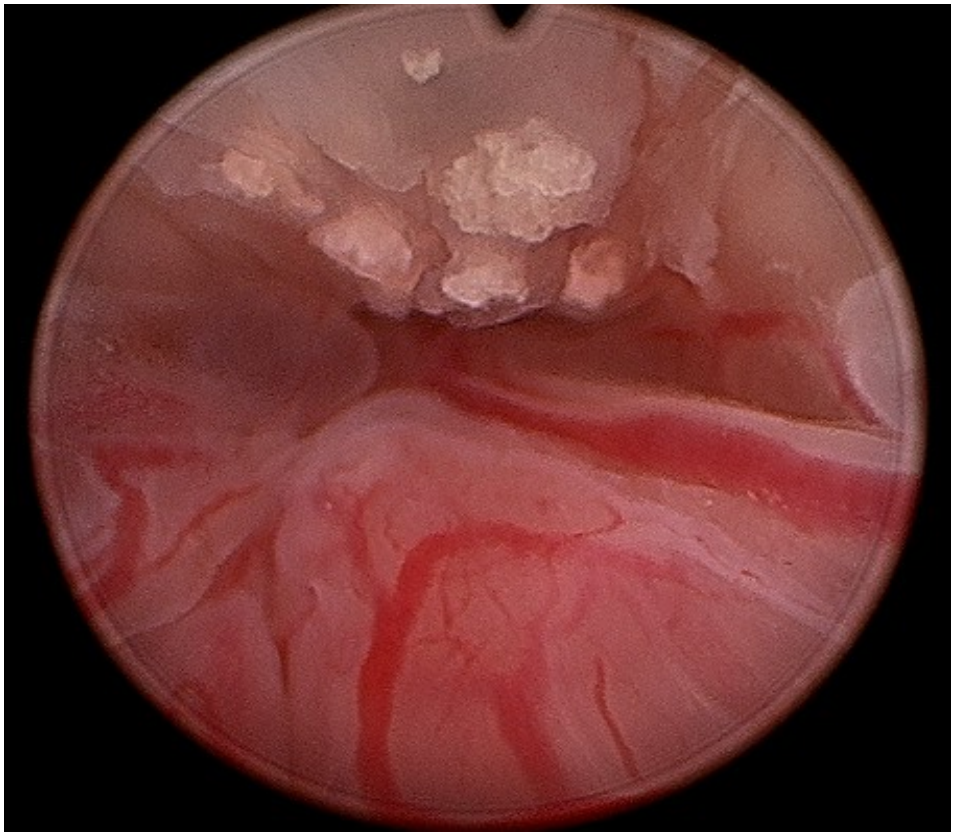
Use of 200-µg vaginal misoprostol, administered vaginally 3 h before diagnostic vaginoscopic hysteroscopy, was found to be simple and effective method of cervical priming in facilitating cervical entry with minimal side effects.

https://doi.org/10.1007/s00404-018-4764-y



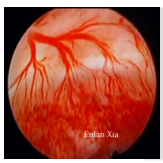
The 22 Fr unipolar resectoscope appears advantageous compared to the 26 Fr resectoscope in the resection of endometrial polyps <3 cm, in terms of cervical dilatation and operative time, pain and need of postoperative analgesics.

https://doi.org/10.1080/13645706.2018.1447965



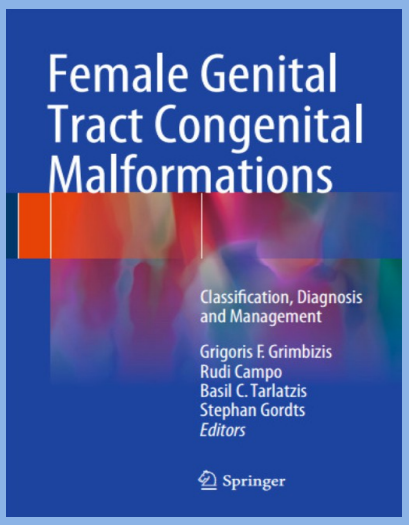
WHAT'S YOUR DIAGNOSIS?

Sometimes, when performing hysteroscopy, it is important to pay attention to every corner of the uterus, as Vasari stated «cerca trova», «he who seeks finds»



Answer to last edition:
Vessels in the dome of an isthmocele

HBOOKS Hysteroscopy!



Grigoris F. Grimbizis, Rudi Campo, Basil C. Tarlatzis, & Stephan Gordts

Springer 2015

Female genital malformations represent miscellaneous deviations from normal anatomy. With a prevalence of approximately 6% in the general population, they might be associated with health problems, potentially dangerous complications or poor reproductive outcome depending on the type and the degree of the anatomical abnormality.

This book presents all uterine, cervical and vaginal anomalies in a systematic way and the new ESHRE/ESGE classification system utilised for their categorization. In addition, their embryogenesis and etiology are summarized.

The diagnostic work-up of women with female genital malformations is reviewed in an evidence-based fashion and taking into account the availability of new non-invasive diagnostic methods. The treatment strategy and the therapeutic alternatives to restore health and reproductive problems associated with their presence are critically reviewed.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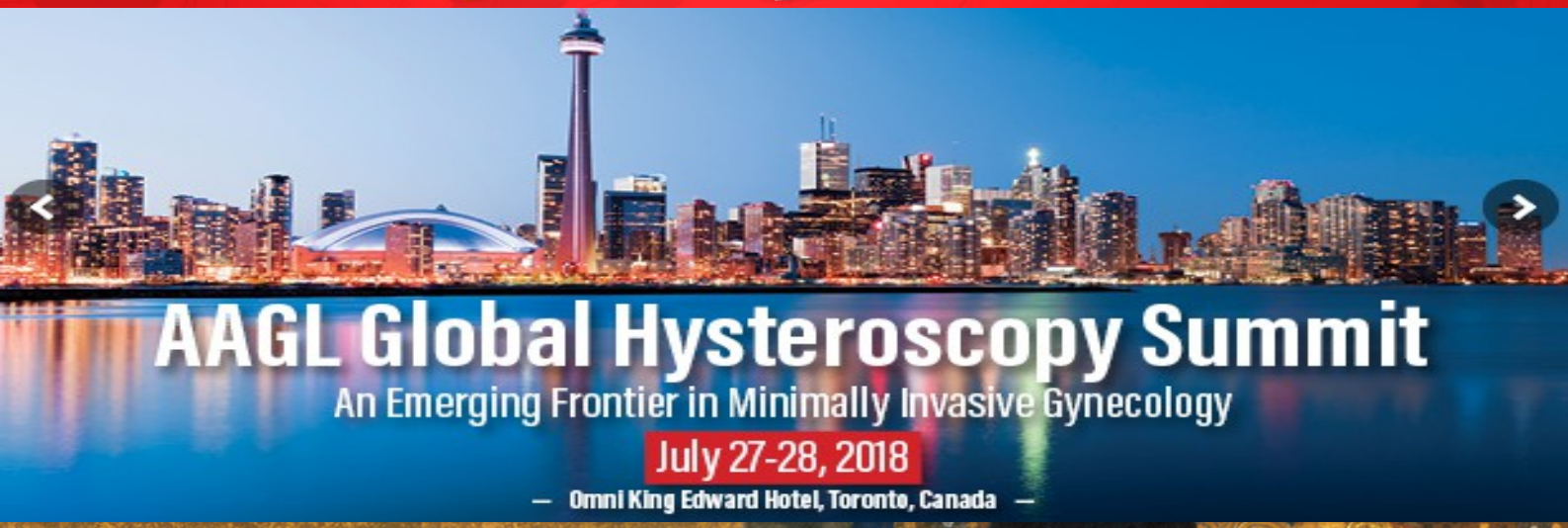
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CASE REPORT

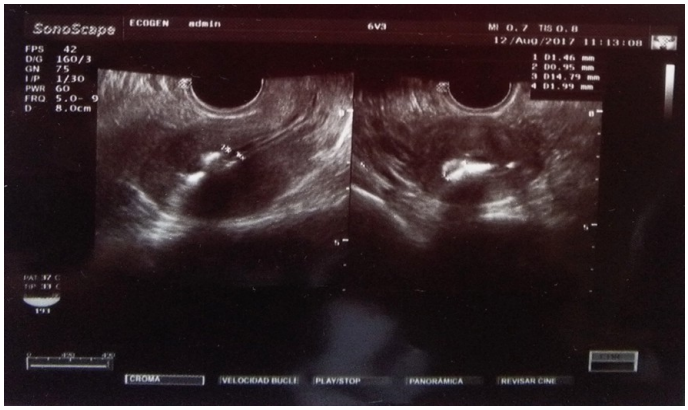
Endometrial Bone Metaplasia

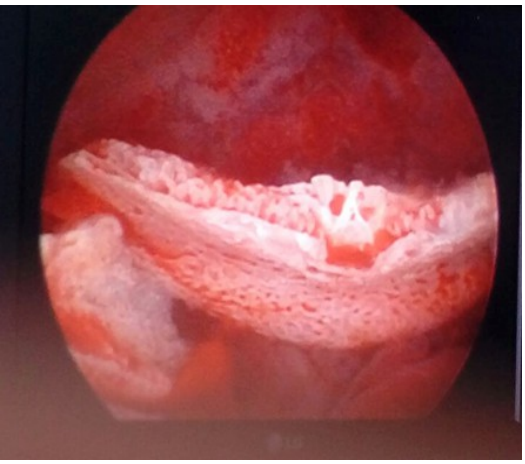
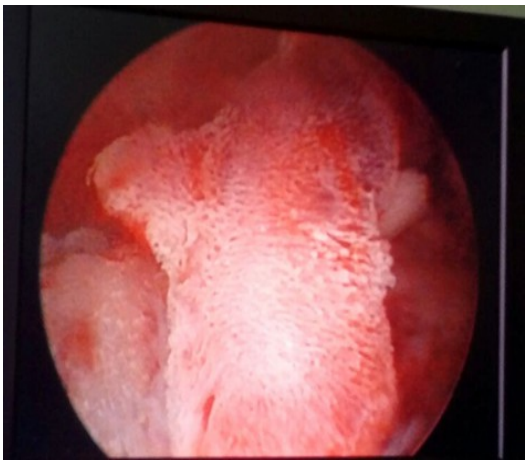
Marco Jara Inofuente. Centro Especializado de Fertilidad y Ginecología. Arequipa. Perú

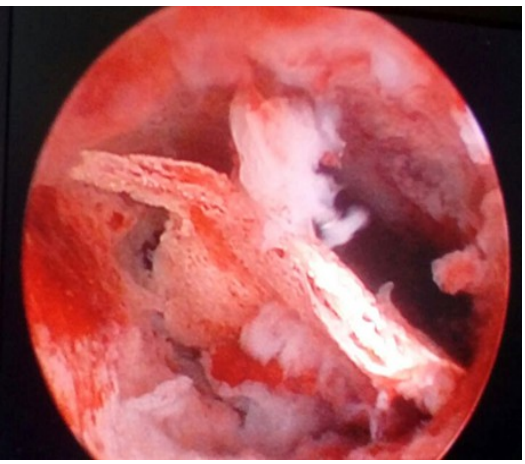
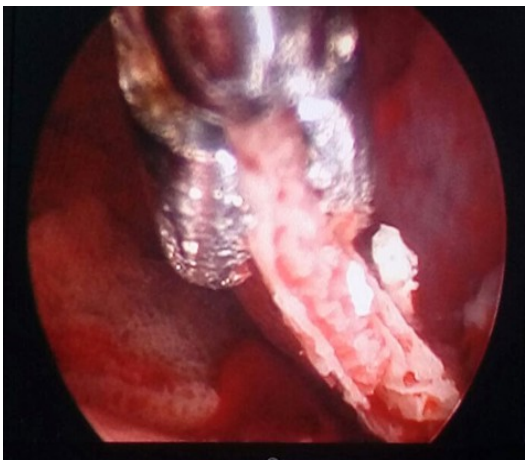
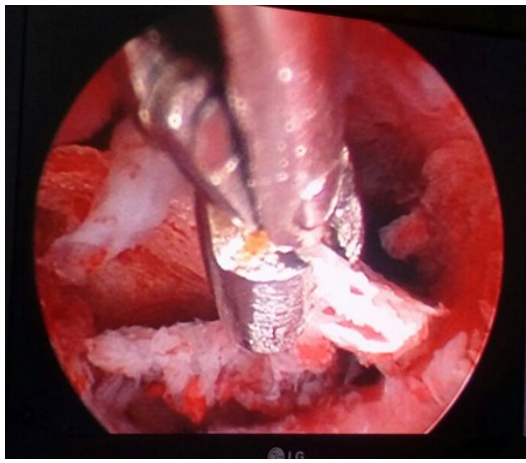
Endometrial bone metaplasia is a rare pathology that causes a wide variety of symptoms such as: uterine bleeding, pelvic pain and infertility. The latter, usually following uterine instrumentation such as surgical abortion. In some cases, the use of transvaginal ultrasound and hysterosalpingography are usually performed for the diagnosis. The recommended treatment is hysteroscopic removal of the intrauterine bone tissue.

CASE

27 y/o G1P0010 who presented complaining of infertility.
Menarche age 13. Menstrual pattern: Regular 5/28 with dysmenorrhea
Reports h/o surgical elective termination of 14 weeks intrauterine pregnancy with D&C
Pelvic: Normal external genitalia, normal vagina. Anteverted normal size uterus, no adnexal mass palpated, no cervical motion tenderness.
Labs: Normal
Hysterosalpingogram: Filling defect at the level of the low uterine segment.
US: Two hyperechogenic structures located inside the uterine cavity.



Endometrial bone metaplasia is a rare pathology, with an incidence of 3 cases per 100,000 women. Clinical suspicion of endometrial bone metaplasia requires to obtain a thorough clinical history. The main symptom is secondary infertility, which is often following a surgical termination of pregnancy.

Infertility results due to a local inflammatory response that prevents fertilization, similar to what occurs in women who have intrauterine devices. In both cases, infertility can be reversed by removing the bone tissue or the IUD.

The patient in our case presented with infertility as the main clinical manifestation but also complaint of dysmenorrhea.

Macroscopically, the lesion can present as white fragment of tissue with serrated edges that are found in the uterine cavity, also presenting as irregular formations of small size and well-defined edges.

The microscopic examination of this tissue shows trabecular bone fragments, mixed with proliferative or secretory endometrium, fibrin clots and absence of inflammatory reaction.

The differential diagnosis includes foreign bodies such as fragments of intrauterine devices, endometrial calcification, calcified leiomyomas, and Asherman's syndrome.

The definitive diagnosis is made by tissue retrieval by operative hysteroscopy. Hysteroscopy should then be recommended as part of evaluation of all patients with secondary infertility; since not only could endometrial bone metaplasia be evidenced, but also chronic endometritis or other conditions that could explain infertility could be found.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HYSTEROSCOPY Editorial teaM

Mahatma Gandhi an insignificant "coloured" lawyer was thrown off a train by the conductor of the train in South Africa, the rest as they say is history. Everyone remembers the Mahatmas name and no one the conductors… Hysteroscopy has been and still is to a great extent discriminated against as the stepchild. But I believe that the Global Congress on hysteroscopy started by the "3 musketeers" was the "Mahatma Gandhi" moment for hysteroscopy and its renaissance.

There is a perceptible movement to rightfully reclaim the ground that hysteroscopy truly deserves. Pushed by these apolitical musketeers, and it is only because of the non political nature, dare I say that they garnered support by all like minded individuals who needed a platform to voice their ideas all over the world.

Nature abhors a vacuum and this vacuum for an apolitical body, for people who are actually doing good work was filled in by this movement. Today it heartens me to see that hysteroscopy awareness is increasing, congresses are giving eminence of space, stand alone hysteroscopy congresses are being organized and this wonderful procedure is finding some of its space and sheen that it had lost.

There is a lot more that we have to cover and hence we must keep spreading the word. While there has been progress with endoscopic surgery in gynaecology in general, hysteroscopy too has progressed with newer technology and finer equipment's coming in whether it is the Morcellator, mini-resectoscope, mini- mini hysteroscope, laser and now with the advent of even AI.

These are exciting times for hysteroscopy and I am truly privileged to be part of the movement, which has such wonderful and exciting and gifted people. For a then youngster who never thought he would be able to learn the art of hysteroscopy it seems surreal. We have a long way till we say that hysteroscopy has reached its potential and there is a need to involve more and more people in this movement around the world.

Professor Linda Bradley's slogan of "My hysteroscope, my stethoscope" should be what we should strive for and I firmly believe that it is possible. The Regional Asia Pacific GCH is a step in that direction and I thank the board for the opportunity given to host it in an area (Asia Pacific), which makes up 2/5ths of the population of the world and incidentally also houses the land of Mahatma Gandhi i.e. India.
To quote Mahatma Gandhi ***"The future depends on what you do today" and " in a gentle way you can shake the world"*** which is what the GCH has done I believe with love and care and giving an opportunity to one and all.
"Truly what we do today will shape what we are tomorrow" and **"Glory lies in the attempt to reach one's goal and not only in reaching it".**

I invite all of you to be a part of the Regional GCH in December 2018 in New Delhi and solicit your support for it.

Please do come.

Rahul Manchanda
Manchanda's Endoscopic Center
New Delhi - India