



AOGD BULLETIN

Volume 27 | July 2026 | Monthly Issue 3

WITH HER: HEAL, EMPOWER, RESPECT- EVERY STEP OF THE WAY

Theme:

Advanced Imaging in Gynaecology: Precision, Clarity, and Care



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From the President's Desk



It is with great pleasure that we present the July issue of the AOGD Bulletin, themed **"Advanced Imaging in Gynaecology: Precision, Clarity, and Care."**

As someone deeply passionate about gynaecology and the art and science of surgery, I have always admired the unique blend of precision, innovation, and compassion that defines our specialty. The ability to diagnose accurately, plan thoughtfully, and intervene effectively is what makes gynaecology both challenging and profoundly rewarding. The evolution of gynaecological imaging has been truly transformative. From being a diagnostic aid to becoming an integral part of clinical decision-making, advanced imaging has empowered us with greater clarity, confidence, and precision. Modern ultrasound techniques, Doppler assessment, 3D/4D imaging, and structured approaches to pathology evaluation have revolutionized the way we understand disease, plan surgical strategies, and optimize outcomes for our patients.

This issue of the bulletin reflects the exciting journey of imaging in gynaecology and its expanding role in everyday practice. It highlights how imaging and surgery are increasingly interconnected—allowing us to anticipate challenges, personalize management, and deliver safer and more effective care. It brings into focus the expanding horizons of gynaecological imaging, highlighting the concept of the "One-Stop Scan" in infertility and recurrent pregnancy loss to the application of advanced ultrasound techniques in the evaluation of fibroid and adnexal masses. The issue further explores vascular pathologies such as enhanced myometrial vascularity and hypervascular retained products of conception, while showcasing the growing impact of Point-of-Care Ultrasound (POCUS) in facilitating timely, bedside decision-making in emergency gynaecological care.

We gratefully acknowledge the authors and contributors who have not only captured the spirit of progress, but in addition, whose valuable academic insights ensure that every advancement translates into meaningful care for our patients. May we continue to nurture our passion for gynaecology, remain curious, compassionate, and committed, and move forward together in shaping the future of women's healthcare.

Dr Neena Malhotra

Professor and Head, Department of Obstetrics and Gynaecology
AIIMS New Delhi

From the Secretarial Desk



Dr K Aparna Sharma
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Dear Members,

It gives us great pleasure to present this issue of the AOGD Bulletin, which focuses on the rapidly evolving scope of gynaecological imaging. Significant advances in technology have enhanced our ability to diagnose disease earlier, characterize pathology more accurately, and tailor management to individual patient needs. From high-resolution ultrasound and Doppler studies to three-dimensional imaging and point-of-care applications, these innovations have redefined standards of care in gynaecological practice.

As clinicians, it is imperative that we integrate evidence-based advancements into our daily practice. In this issue, we bring together the newer diagnostic tools, expert perspectives and practical insights for day to day gynaecology practice which will not only improve clinical outcomes but also strengthen our commitment to delivering safe, effective, and patient-centered care. I am confident that the content will serve as a valuable academic resource for both practicing clinicians and trainees.

We extend our sincere appreciation to the editorial team and authors for their dedication and tremendous efforts in making this edition possible.

AOGD Secretariat

From the Editor's Desk



Dr Reeta Mahey



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Dr Archana Kumari



Dr Anubhuti Rana



Dr Swati Tomar

Dear AOGD Members,

It is with great enthusiasm that we present the July issue of the AOGD Bulletin, centered around the theme "Advanced Imaging in Gynaecology: Precision, Clarity, and Care." In the modern gynaecology, imaging has transitioned from a supportive diagnostic tool to the very cornerstone of clinical decision-making. The ability to visualize pathology with unprecedented clarity allows us to move away from diagnostic uncertainty and step confidently into the era of precision medicine.

With traditional understanding of USG being the first line imaging modality for women presenting with any gynaecological complaint, we have come a long way from just a Gray-scale image to the 3-D imaging of the uterus, doppler characteristics of uterine and adnexal lesions and volumetric analysis. Advancements in ultrasound have significantly attenuated the referrals for MRI and diagnostic hysteroscopy.

This issue has been thoughtfully curated to reflect the diverse, everyday clinical challenges we face and sonographic strategies available to solve them. We explore the paradigm of the "One Stop Scan" in managing infertility and recurrent pregnancy loss, alongside the transformative role of 3D/4D imaging in accurately evaluating mullerian anomalies and fibroid. Navigating the complexities of adnexal masses is made simpler with structured approaches to the "Adnexal Enigma," utilizing pattern recognition and simple rules to distinguish benign from malignant lesions.

Furthermore, this edition sheds light on critical vascular dynamics, including enhanced myometrial vascularity (EMV) and vascular retained products of conception (RPOC). Emphasizing the need for rapid, real-time diagnostics, our feature on "Probe at the Bedside" highlights the expanding and vital role of Point-of-Care Ultrasound (POCUS) in emergency gynaecology.

Beyond our core features, readers will find immense value in our "Imaging of the Month," which provides a deep dive into the nuances of interstitial pregnancy, alongside our comprehensive Journal Scan and Brain Boost Zone. We would like to sincerely acknowledge and appreciate the valuable contributions of all the authors and experts, whose profound insights and practical wisdom have enriched this issue. As we use these advanced tools to look through a clearer lens toward the future of women's health, let us continue to unite with HER-to Heal, Empower, and Respect, every step of the way.

The Editorial Team

One Stop Scan: Sonographic Strategies in Infertility and Recurrent Pregnancy Loss

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INTRODUCTION

Ultrasound has evolved into an indispensable extension of the clinical examination in reproductive medicine. In women with infertility or recurrent pregnancy loss (RPL), a comprehensive transvaginal scan (TVS) performed at the initial consultation can provide information regarding uterine anatomy, endometrial receptivity, ovarian reserve, ovulatory status, and pelvic pathology. Successful conception depends on the interplay of multiple factors, including adequate ovarian reserve, normal ovulation, a receptive endometrium, a normal uterine anatomy, patent fallopian tubes, and a favourable pelvic environment. Ultrasound provides a surrogate assessment of each of these components and has therefore become central to fertility evaluation.

The concept of a "One Stop Scan" integrates a systematic assessment of the uterus, endometrium, myometrium, ovaries, and pelvic environment into a single structured examination (**Figure 1**)¹. Unlike a routine gynaecological ultrasound, it combines both structural and functional evaluation of the reproductive tract, providing comprehensive information on factors that influence the fertility potential. This approach improves diagnostic efficiency, reduces delays in management, and facilitates individualized treatment¹.

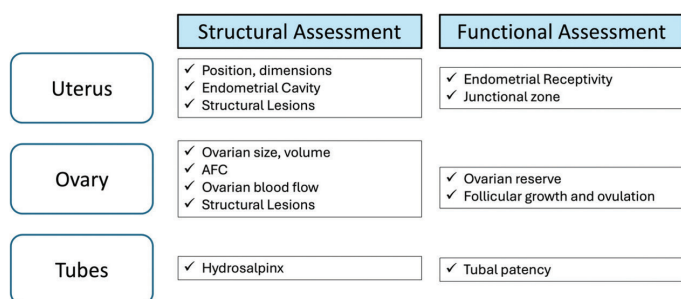


Figure 1. Conceptual framework of the one-stop fertility scan, illustrating the integration of structural and functional assessment of the female reproductive tract during a single ultrasound examination.

TIMING OF THE SCAN

Traditionally, fertility ultrasound assessment was performed across different phases of the menstrual cycle. One-stop fertility scan allows maximum diagnostic information to be obtained during a single visit. Optimal timing for this scan depends on the clinical indication. For women requiring tubal patency assessment, scan is ideally performed

during the late follicular phase (days 10–12).¹ However, for women undergoing pre-IVF evaluation, scheduling the examination slightly later in the cycle (up to day 16) may provide additional information regarding endometrial maturation and receptivity.

Table 1: Systematic Approach to the One-Stop Fertility Scan

Systematic Approach to the One-Stop Fertility Scan	
Uterus	
• Position, size, mobility • Uterine cavity and Müllerian anomalies • Structural Lesions (Fibroids/adenomyosis) • Endometrium - Thickness - Morphology - Vascularity • Junctional Zone	
Ovary	
• Position mobility and morphology • Ovarian volume • AFC • Ovarian Cysts • Stromal blood flow • Follicular development	
Fallopian Tubes	
• Structure • Tubal Patency	
Pelvic Pathology	
• Pouch of Douglas • Sliding Sign • Endometriosis/Adhesions	

UTERINE ASSESSMENT

Uterine assessment is a cornerstone of the one-stop fertility scan as uterine abnormalities may adversely affect implantation and reproductive outcomes. Evaluation should include uterine size, position, contour, and mobility. Uterus should be measured in sagittal and transverse planes, with documentation of its dimensions and orientation as anteverted, retroverted, or midline.² Reduced uterine mobility may suggest pelvic adhesions or endometriosis. Careful assessment of external uterine contour is essential for the identification of congenital anomalies and acquired pathology.² Congenital uterine anomalies are an important cause of RPL and should be actively sought during fertility ultrasound evaluation. Three-dimensional ultrasound (3-D TVS) is particularly valuable for assessing cavity

morphology and diagnosing Müllerian anomalies, with the coronal plane providing accurate differentiation between the various anomaly types (Figure 2).

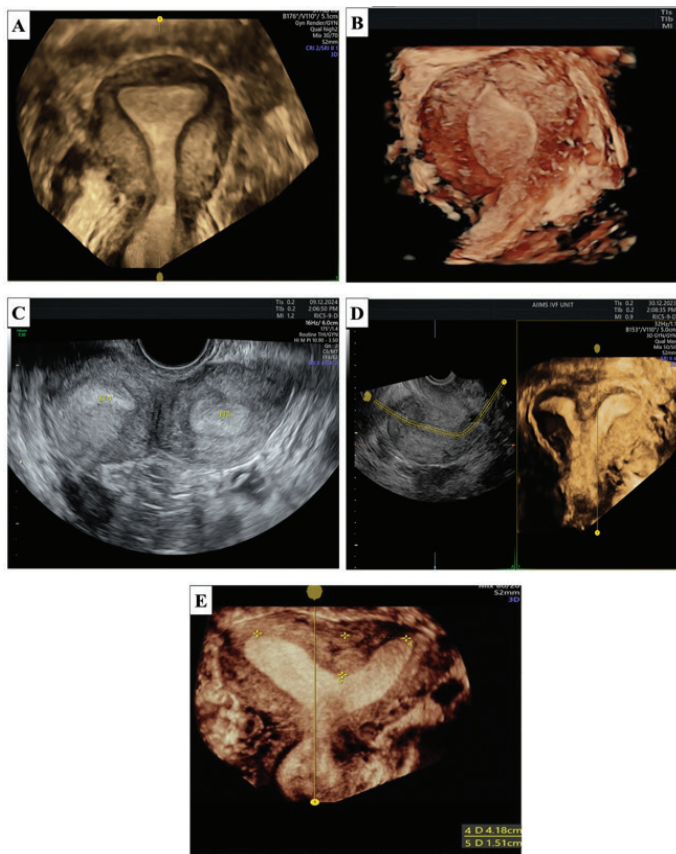


Figure 2. Assessment of uterine cavity morphology using three-dimensional ultrasound.

(A) Normal uterine cavity. (B) Unicornuate uterus. (C) Two-dimensional ultrasound demonstrating two separate endometrial cavities. (D) Bicornuate uterus. (E) Septate uterus.

Endometrial Thickness, Pattern and Vascularity

Endometrium should be assessed for thickness, morphology, echogenicity, vascularity and intracavitary lesions. Endometrial thickness is measured in the midsagittal plane as the maximum distance between the two endo-myometrial interfaces. Morphological assessment includes evaluation of the endometrial pattern. During late follicular phase, a trilaminar or “triple-line” appearance reflects appropriate estrogenic stimulation and is generally considered favourable for implantation. In contrast, premature hyperechogenic endometrium may reflect altered endometrial maturation and has been associated with reduced implantation potential (Figure 3). Colour and Power Doppler may be used to assess endometrial vascularity, providing additional information regarding endometrial receptivity.

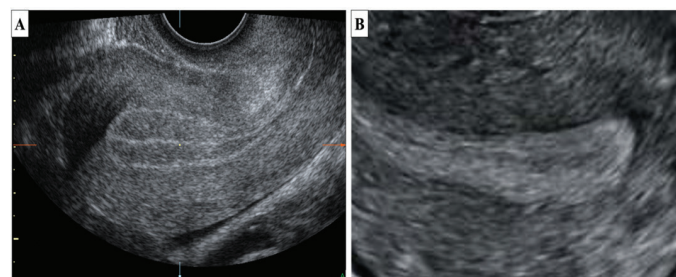


Figure 3. Endometrial morphology assessment during the one-stop fertility scan. (A) Trilaminar endometrium demonstrating the characteristic peri-ovulatory “triple-line” appearance. (B) Homogeneously hyperechoic endometrium, typically seen following ovulation

Endometrial Cavity

Assessment of the uterine cavity may identify intracavitary lesions such as endometrial polyps, submucosal fibroids, and intrauterine adhesions, which can impair implantation and contribute to RPL.

Endometrial Polyp

Endometrial polyps appear as focal echogenic intracavitary lesions, often with a characteristic single feeding vessel on Colour Doppler (Figure 4).

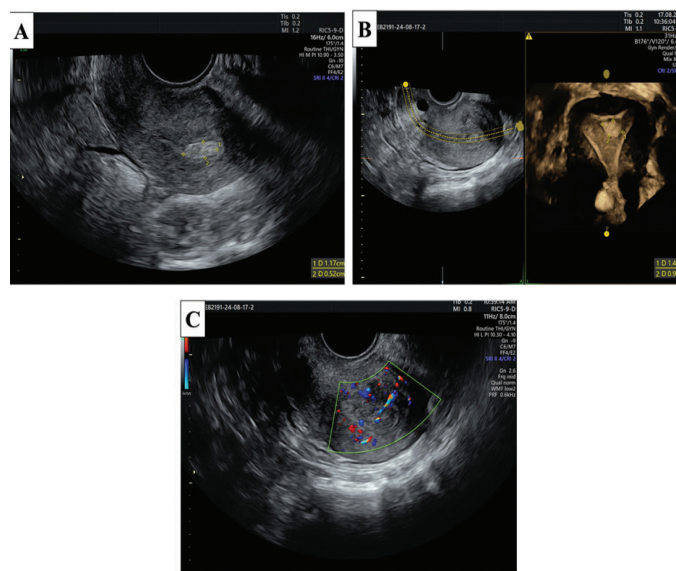


Figure 4. Endometrial polyp (A) 2D TVS demonstrating a well-defined echogenic intracavitary lesion (B) 3D view delineating the relationship of the lesion to the cavity. (C) Colour Doppler demonstrating the characteristic single feeding vessel

Intrauterine Adhesions

Intrauterine adhesions (synechiae) appear as echogenic bands traversing the endometrial cavity causing an irregular contour and disruption of the endometrial stripe (Figure 5). Severe adhesions may result in cavity obliteration. They are an important cause of infertility, implantation failure, menstrual abnormalities, and RPL.

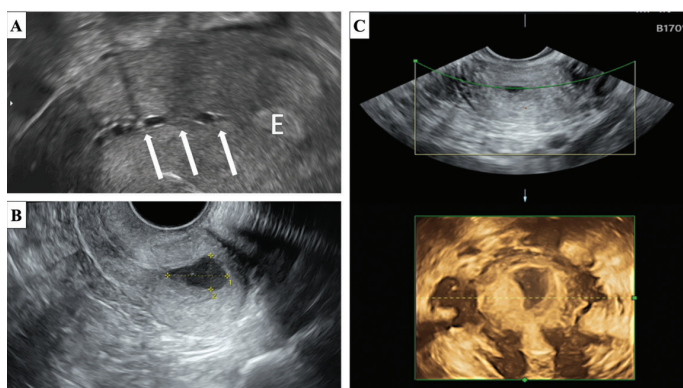


Figure 5. Intrauterine adhesions.

(A) Echogenic synechiae traversing the endometrial cavity on 2D ultrasound. (B) Severe adhesions resulting in partial cavity obliteration with intracavitary fluid accumulation. (C) 3D ultrasound demonstrating cavity distortion and fluid trapped within a partially obstructed cavity.

Junctional Zone (JZ) Assessment

The JZ should appear as a smooth, regular hypoechoic layer surrounding the endometrial cavity. Irregularity, interruption, thickening, or poor definition are recognised sonographic markers of adenomyosis².

Myometrial Pathology

The myometrium should be systematically assessed for abnormalities associated with infertility and RPL.

Fibroids

Fibroids should be described according to their number, size, location, and relationship to the cavity using the FIGO classification system (Figure 6).

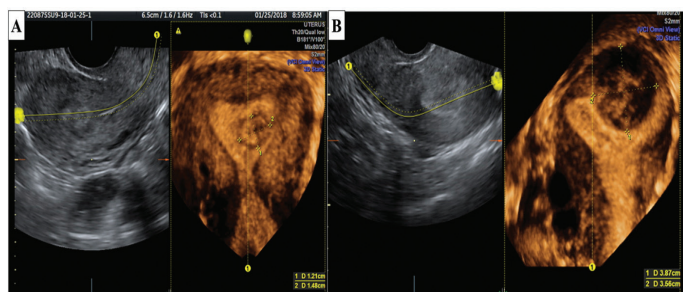


Figure 6. 2D and 3D ultrasound images demonstrating FIGO Type 0 (A) and FIGO Type 1 (B) submucosal fibroids.

Adenomyosis

Adenomyosis is increasingly recognized as a contributor to infertility, implantation failure and RPL. Sonographic features described by the MUSA criteria² include asymmetrical myometrial thickening, myometrial cysts, hyperechoic islands, fan-shaped shadowing, translesional vascularity, and JZ irregularity (Figure 7). Together, assessment of the uterus, uterine cavity, endometrium, JZ, and myometrium provides a comprehensive evaluation of uterine factors affecting reproductive outcomes.

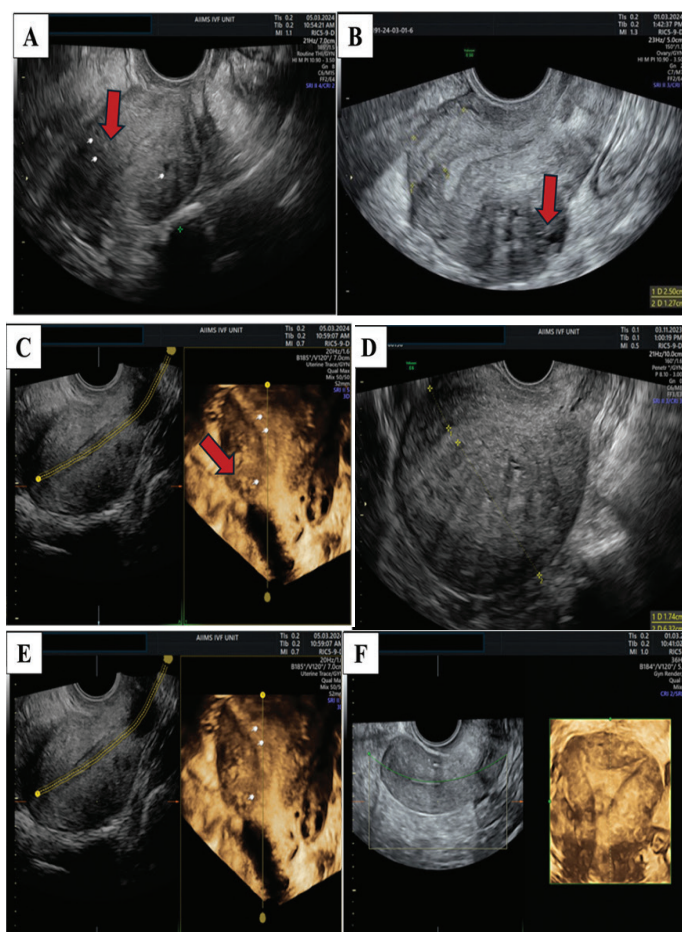


Figure 7. Sonographic features of adenomyosis according to the MUSA criteria. Representative TVS and 3D ultrasound images demonstrating (A) echogenic islands, (B) myometrial cysts, (C) sub-endometrial lines and buds, (D) globular uterine enlargement with asymmetrical thickening and fan-shaped shadowing, (E) interrupted JZ on 3D ultrasound, and (F) translesional vascularity

EVALUATION OF THE OVARIES

A systematic evaluation of the ovaries is also an essential component of the one-stop fertility scan. Assessment should include ovarian morphology, size, position, and mobility. Restricted ovarian mobility or abnormal ovarian location may indicate pelvic adhesions and endometriosis. Any ovarian cysts should be identified and characterized as functional, simple, haemorrhagic, dermoid, endometriotic, or complex lesions, as these findings may influence fertility management.

Evaluation of the ovarian reserve is a key objective of the one-stop scan. Ovarian volume and antral follicle count (AFC) are the principal sonographic markers used for this purpose. AFC remains the most reliable ultrasound marker of ovarian reserve and correlates strongly with ovarian responsiveness during assisted reproduction. A low AFC is associated with diminished ovarian reserve, whereas a high AFC suggests polycystic ovarian morphology (PCOM) and an increased risk of hyper-response during ovarian stimulation.⁴

AFC: Technique

For accurate AFC measurement, each ovary should be examined in both longitudinal and transverse planes to assess its morphology. The transducer is then swept systematically across the ovary, and all round or oval sonolucent follicles measuring 2–10 mm are counted. The counts from both ovaries are combined to obtain the total AFC⁴. (Figure 6) Current evidence suggests that AFC can be assessed throughout the menstrual cycle, provided dominant follicles and corpora lutea are recognized and excluded. 3D ultrasound and automated follicle counting systems, such as SonoAVC, may further improve the reproducibility of AFC assessment.

Ovarian Volume

Ovarian volume provides additional information regarding ovarian reserve. Ovarian volume below 3 mL is associated with diminished ovarian reserve, whereas enlarged ovarian volumes (>10ml) are observed in women with PCOM (Figure 8).

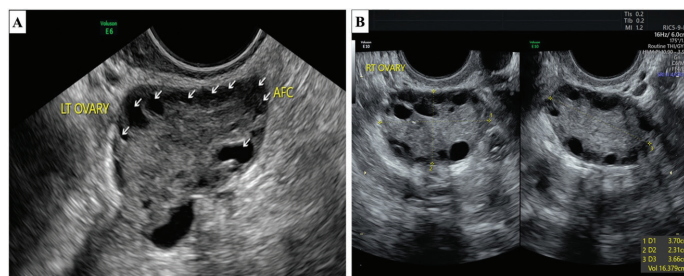


Figure 8. Sonographic markers of ovarian reserve. (A) Antral follicle count (AFC) assessment. (B) Ovarian volume measurement using three orthogonal ovarian dimensions obtained in the longitudinal and transverse planes.

Follicular Development

A unique advantage of the one-stop fertility scan is the simultaneous assessment of ovarian function and endometrial response. The presence of a dominant follicle (Figure 9) confirms active follicular recruitment and provides information regarding ovulatory potential. Simultaneous assessment of the endometrium allows evaluation of the response to endogenous oestrogen stimulation. One-stop scan can also identify features suggestive of impending or recent ovulation, including irregularity of the follicular wall, free fluid within the Pouch of Douglas (POD), and corpus luteum formation.

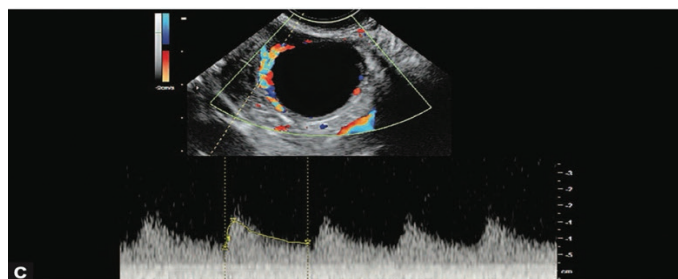
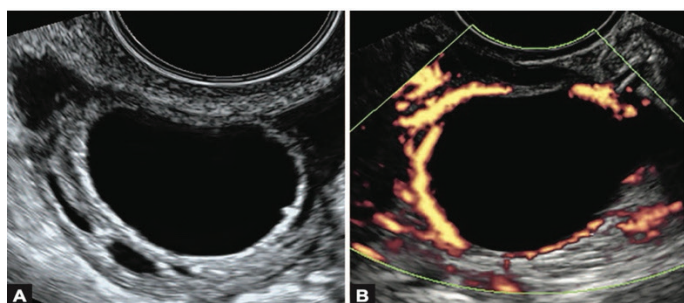


Figure 9. Assessment of follicular development and vascularity. (A) 2D TVS demonstrating a dominant preovulatory follicle. (B) Power Doppler showing circumferential perfollicular vascularity surrounding the dominant follicle. (C) Doppler assessment of perifollicular blood flow.

Polycystic Ovarian Morphology (PCOM)

Polycystic ovarian morphology (PCOM) is a common finding during fertility ultrasound. Current diagnostic criteria based on the 2023 International evidence-based guideline⁵ are summarized in Table 2. Recognition of PCOM is clinically important because it contributes to the diagnosis of Polyendocrine metabolic ovarian syndrome (PMOS) when interpreted in the appropriate clinical context, and identifies women at risk of hyper-response during ovarian stimulation (Figure 10).

Table 2: Diagnostic Criteria for PCOM

PCOM: Diagnostic Criteria

PCOM is defined by the presence of either of the following in at least one ovary:

- Follicle number per ovary (FNPO) ≥ 20 follicles measuring 2–9 mm when assessed using a transvaginal transducer with a frequency of at least 8 MHz.
- Ovarian volume ≥ 10 mL OR Follicle number per section (FNPS) 210 when older ultrasound technology is used or image quality is insufficient for accurate follicle counting throughout the entire ovary

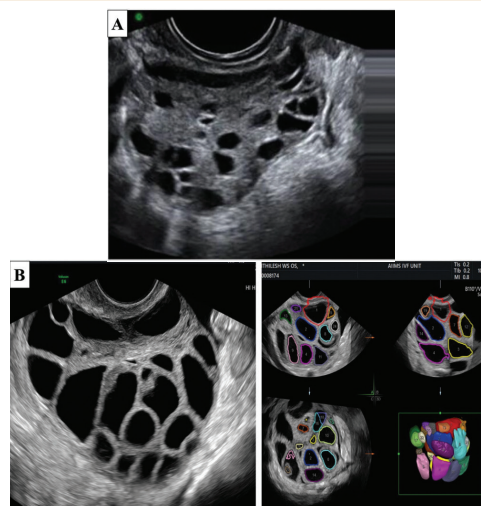
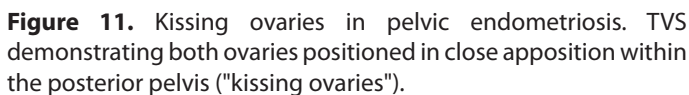


Figure 10. Assessment of polycystic ovarian morphology (PCOM). (A) Transvaginal ultrasound demonstrating multiple small follicles characteristic of PCOM. (B) Three-dimensional ultrasound with automated follicle counting (SonoAVC).

Fertility ultrasound extends beyond evaluation of the uterus and ovaries to include assessment of the pelvic environment. Identification of pelvic pathology during the initial scan has important implications for counselling, surgical planning, and fertility treatment. The sliding sign is a simple but valuable dynamic manoeuvre that assesses the mobility of pelvic organs under gentle pressure from the transvaginal probe. A negative sliding sign is a reliable sonographic marker of posterior compartment adhesions and POD obliteration. In addition, transvaginal ultrasound can be used to identify and map deep infiltrating endometriosis (Figure 11).



Assessment of the fallopian tubes is also essential, as tubal disease contributes to approximately one-third of female infertility cases. The introduction of hysterosalpingo-contrast sonography (HyCoSy) and hysterosalpingo-foam sonography (HyFoSy)⁶ has expanded the scope of the one-stop fertility scan, enabling simultaneous assessment of tubal patency as part of a comprehensive outpatient fertility evaluation. (Figure 12) These techniques involve the transcervical instillation of contrast medium under transvaginal ultrasound guidance, allowing visualization of contrast passage through the fallopian tubes. HyCoSy uses echogenic contrast media, including air-saline mixtures and microbubble-based agents such as SonoVue® (phospholipid-shelled sulphur hexafluoride microbubbles). Visualization of uninterrupted contrast flow with free peritoneal spill confirms tubal patency, while absent or impaired flow may indicate tubal obstruction. HyFoSy uses foam-based contrast, such as ExEm® Foam, a mixture of hydroxyethyl cellulose, glycerol, and purified water, which enhances tubal visualization and is generally associated with improved patient comfort.⁶ Current guidelines recommend HyCoSy as the preferred first-line outpatient test⁷ for tubal patency in women at low risk of pelvic pathology.

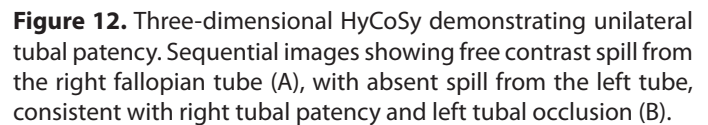


Figure 13. Sonographic appearance of hydrosalpinx.

(A) 2D TVS demonstrating a dilated, fluid-filled fallopian tube with incomplete septations and a folded tubular configuration. (B) Longitudinal TVS image demonstrating a dilated tubular structure adjacent to the ovary.

The one-stop fertility scan has transformed the evaluation of infertility and RPL by integrating structural and functional assessment of the female reproductive tract into a single visit. Through systematic evaluation of the uterus, endometrium, myometrium, ovaries, follicular development, and, where appropriate, tubal patency, it provides a comprehensive assessment of the reproductive potential.

When performed using a structured protocol, this scan streamlines the diagnostic pathway, reduces the need for multiple investigations, and facilitates timely, individualized management, making it a cornerstone of modern fertility assessment.

- The one-stop fertility scan combines structural and functional assessment in a single visit, improving

diagnostic efficiency and individualized care.

- Systematic ultrasound evaluation can identify many uterine, ovarian, tubal, and pelvic causes of infertility and RPL.
- Three-dimensional ultrasound improves assessment of intracavitary and JZ abnormalities.
- AFC remains the most reliable USG marker of ovarian reserve.
- Dynamic ultrasound assessment aids evaluation of ovulation, endometriosis, and pelvic adhesions.
- HyCoSy and HyFoSy enable outpatient assessment of tubal patency.

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Calendar for AOGD Monthly Clinical Meeting 2026-2027

31 st July 2026	Army Hospital- Research &Referral
28 th August 2026	AIIMS
25 th September 2026	VMMC &Safdarjung Hospital
30 th October 2026	DDU Hospital
27 th November 2026	MAMC & LNJP Hospital
18 th December 2026	Sir Ganga Ram Hospital
29 th January 2027	Dr RML Hospital
26 th February 2027	UCMS & GTB Hospital
19 th March 2027	LHMC & SSK Hospital
30 th April 2027	ESI, Basaidarapur Hospital

Mullerian Anomalies- Advanced Imaging Modalities and Management Guide

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INTRODUCTION

Congenital Mullerian anomalies (CMAs) are structural defects of the female reproductive tract arising from abnormal formation, fusion, canalization, or septal resorption of the Mullerian ducts during embryogenesis between the 6th and 22nd weeks of gestation. Although the prevalence in general population is 5–7%, CMAs are encountered considerably more often among women presenting with primary amenorrhoea (with or without cyclic pelvic pain), infertility (8–10%), recurrent implantation failure, recurrent pregnancy loss (15–25%), and adverse obstetric outcomes underscoring their clinical relevance across the reproductive lifespan.¹

Accurate diagnosis of CMAs is essential, as management differs substantially depending on the specific anomaly present. Hysterosalpingography (HSG), hysteroscopy, laparoscopy, and magnetic resonance imaging (MRI) have traditionally been used for evaluation, but three-dimensional ultrasonography (3D USG) has since

transformed this diagnostic approach. In sexually active women, three-dimensional transvaginal ultrasonography (3D TVS) is the imaging modality of choice because it provides simultaneous visualization of the endometrial cavity and external uterine contour in the true coronal plane.¹⁻² In adolescents and virginal patients, transabdominal ultrasonography (TAS), with three-dimensional (3D) reconstruction whenever feasible, or transrectal ultrasonography (where expertise is available) is preferred as the initial imaging modality, while MRI is reserved for complex anomalies or equivocal ultrasound findings. The American Society for Reproductive Medicine Müllerian Anomalies Classification (ASRM MAC 2021) classifies CMAs into nine categories (M1–M9).¹ 3D USG complements this classification by accurately defining uterine morphology, cervical anatomy, vaginal abnormalities, and associated obstructive lesions, thereby facilitating standardized diagnosis and guiding management (Table 1).

Table 1. Role of USG According to ASRM MAC Classification (2021)

Parameter	M1	M2	M3	M4	M5	M6	M7	M8	M9
Anomaly	MRKH syndrome	Cervical agenesis / dysgenesis	Unicornuate uterus	Uterus didelphys	Bicornuate uterus	Septate uterus	Longitudinal vaginal septum	Transverse vaginal septum	Complex anomalies
Embryological defect	Failure of formation	Cervical developmental defect	Unilateral Müllerian duct development	Complete fusion failure	Partial fusion failure	Failure of septal resorption	Vaginal fusion defect	Failure of vaginal canalization	Combined developmental defects
Characteristic USG findings (2D/3D TAS/3D TVS)	Absent/rudimentary uterus with normal ovaries; delineates uterine remnants and vaginal anatomy	Absent or hypoplastic cervix with hematometra and vaginal anomalies	Banana-shaped uterus ± rudimentary horn; assesses functional cavity and communication	Two uterine bodies, two cavities, two cervices ± longitudinal vaginal septum	Deep external fundal cleft with two communicating horns	Normal external contour with internal fibromuscular septum; measures septal dimensions	Defines septal length, thickness and relation to cervix	Defines level, thickness and extent of septum with hematocolpos/hematometra	Defines complex uterocervicovaginal anatomy and associated renal anomalies
Clinical presentation	Primary amenorrhoea	Primary amenorrhoea with cyclic pain	Infertility, miscarriage, obstetric complications	Infertility or obstructed hemivagina	Recurrent pregnancy loss, preterm birth	Recurrent miscarriage, infertility	Dyspareunia, obstruction	Primary amenorrhoea with cyclic pain	Variable; depends on anomaly
Management	Vaginal dilatation; vaginoplasty if required	Uterovaginal anastomosis/cervical reconstruction; hysterectomy if unreconstructable	Excision of functional non-communicating rudimentary horn	Usually conservative; excision of symptomatic vaginal septum	Conservative; Strassman metroplasty in selected women	Hysteroscopic septal resection	Surgical excision if symptomatic	Surgical excision with vaginoplasty	Individualized reconstructive surgery

ROLE OF ULTRASONOGRAPHY IN CMAS IN ADOLESCENTS

A. Primary amenorrhoea without cyclic pelvic pain

Ultrasonography is the initial imaging modality in adolescents presenting with primary amenorrhoea, as the first diagnostic question is whether the uterus is present or absent. An absent or severely hypoplastic uterus with normal ovaries strongly suggests Mayer-Rokitansky-Kuster-Hauser (MRKH) syndrome while presence of uterus hints towards other causes of primary amenorrhoea (hypogonadotropic hypogonadism, tuberculosis etc).

B. Primary amenorrhoea with cyclic pelvic pain

Primary amenorrhoea associated with cyclic pelvic pain should raise suspicion for an obstructive müllerian anomaly with differential diagnosis of imperforate hymen, transverse vaginal septum and cervical agenesis.

Imperforate hymen is a clinical diagnosis with bulging hymen (bluish discoloration) while other anomalies are diagnosed on TAS. Demonstration of hematocolpos and its extent, hematometra may help to diagnose the level of obstruction (Figure 1). This helps us to directly post the patient for surgery rather than doing EUA (examination under anaesthesia) for these young adolescents. MRI is reserved for cases with inconclusive findings on USG.

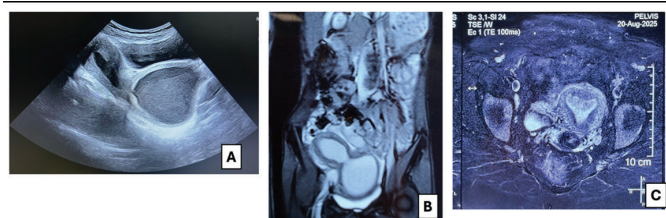


Figure 1: (A) 2D TAS image of Transverse Vaginal septum with hematocolpos and hematometra; (B) MRI picture showing similar findings and (C) MRI picture with cervical agenesis and hematometra.

C. Progressive dysmenorrhoea

Progressive dysmenorrhoea soon after menarche should prompt evaluation for obstructive müllerian anomalies, particularly when symptoms fail to respond to conventional medical therapy. 3D USG performed by transvaginal, transrectal, or transabdominal route depending on patient characteristics, is invaluable for diagnosing different anomalies causing dysmenorrhea. Surgical correction is the treatment of choice due to risk of endometriosis and retrograde menstruation. Understanding the anatomy helps us to decide the appropriate surgical approach keeping in mind the future reproductive functions. Figure 2 describes the possible obstructive anomalies and their route of management for best future reproductive outcomes. Mere drainage of hematometra by giving incisions or needle drainage must be avoided due to risk of sepsis and poor surgical outcomes. These conditions are frequently overlooked and misdiagnosed as primary dysmenorrhoea.

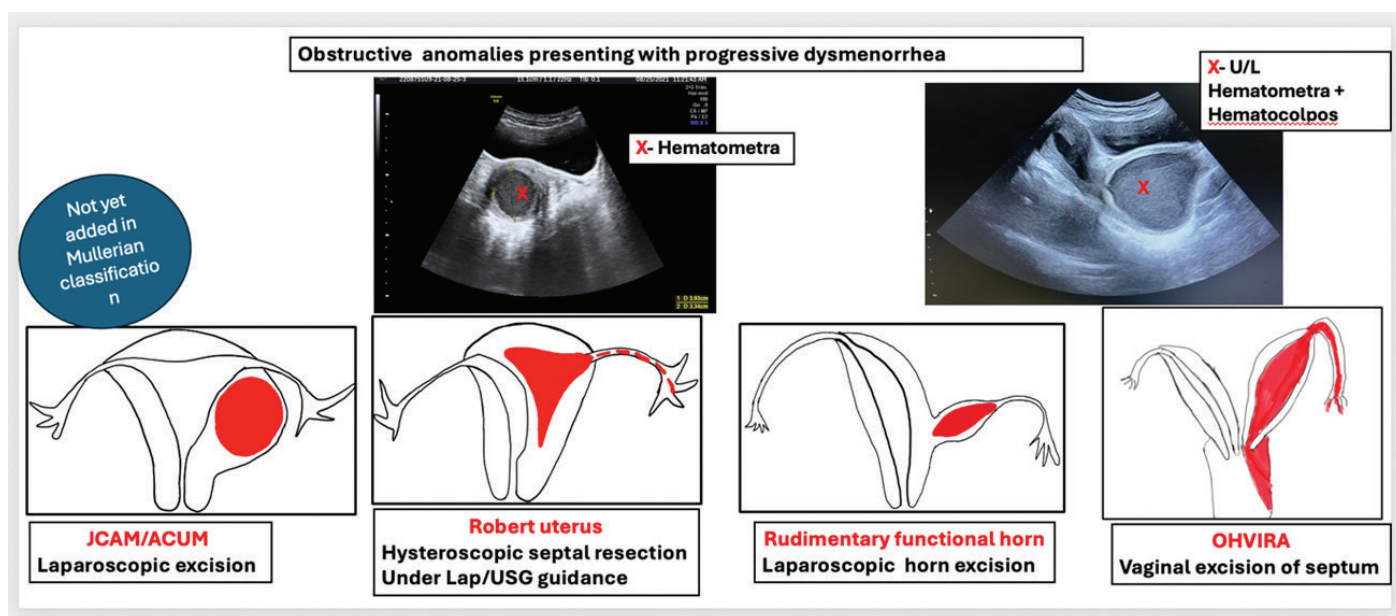


Figure 2: (A) Pictorial representation anomalies presenting as progressive dysmenorrhea especially and USG showing either hematometra or uterine didelphys with unilateral hematometra + hematocolpos

Out of these, rudimentary functional horn and OHVIRA syndrome (obstructive hemivagina + ipsilateral renal agenesis) are easily diagnosed on imaging, but Robert uterus and accessory cavitated uterine masses (ACUM/JCAM) are usually misdiagnosed and confused with each other due to similar clinical presentation, similar findings on USG and low awareness among clinicians. Although final diagnosis is possible on laparoscopy and hysteroscopy only, imaging helps us to guide the surgical route and procedure.³ Figure 3 describes the imaging findings of Robert uterus and figure 4 describes the imaging and lap findings of ACUM.



Figure 3: (A) 2D and 3D ultrasound images; (B) corresponding MRI findings and (C)- Laparoscopic view of Robert uterus (15 yr old girl presenting with progressive dysmenorrhea)

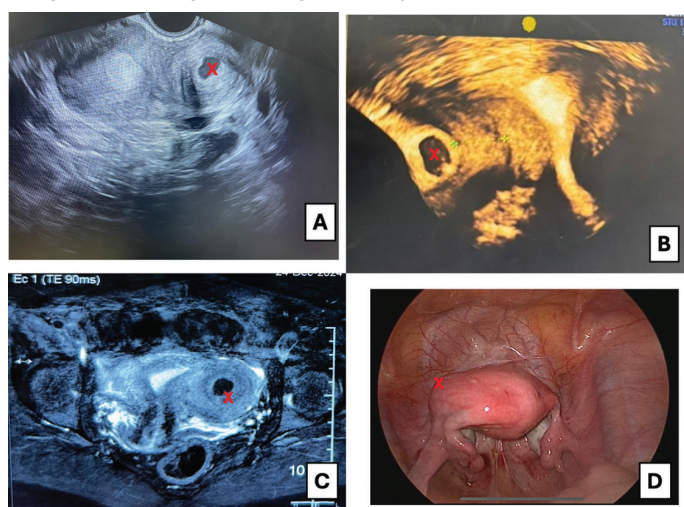


Figure 4. (A and B) 2-D and 3-D TVS images of ACUM; (C) Corresponding MRI image; (D) Laparoscopic view of ACUM (normal fundus and cornua and lesion below the insertion of round ligament)

ROLE OF THREE-DIMENSIONAL TVS IN REPRODUCTIVE-AGE WOMEN WITH CMAS

Among women presenting with infertility or recurrent pregnancy loss, 2-D and 3-D TVS is the first line imaging modality of choice to delineate uterine anatomy and its anomalies (Figure 5).

Prior to the widespread availability of 3D TVS, differentiation frequently required combined hysteroscopy and laparoscopy or MRI. The reconstructed coronal plane provided by 3D TVS now allows simultaneous assessment of the external fundal contour and endometrial cavity during a single outpatient examination. A septate uterus, resulting from failure of septal resorption, demonstrates a normal external fundal contour with an internal fibromuscular septum. In addition to confirming the diagnosis, 3D TVS accurately measures septal length, width, angle, and residual fundal myometrial thickness, thereby facilitating preoperative planning for hysteroscopic septoplasty.

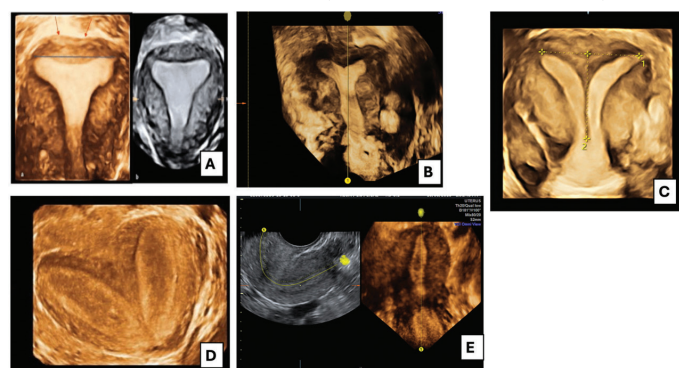


Figure 5. demonstrates (A) 3D TVS of a normal uterus (B) Arcuate uterus; (C) Septate uterus ; (D) Bicornuate uterus and (E)- Unicornuate uterus

In contrast, a bicornuate uterus results from incomplete müllerian duct fusion and is characterized by a deep external fundal cleft with two divergent uterine horns. Because management is generally conservative, accurate differentiation from septate uterus is essential to avoid unnecessary hysteroscopic surgery. The objective 3D ultrasonographic criteria used to differentiate septate and bicornuate uterus are summarized in Table 2.

Parameter	Septate Uterus	Bicornuate Uterus
External (fundal) indentation depth	< 10 mm (or absent/minimal)	> 10 mm (deep fundal cleft)
Intercornual angle	Usually < 75° (acute)	Usually > 105° (obtuse)
Intercornual distance	Usually, < 4 cm	Usually, > 4 cm
External fundal contour	Convex, flat, or mildly concave	Deep fundal cleft (heart-shaped uterus)
Management	Hysteroscopic septoplasty	Usually, conservative

NEED FOR MRI

MRI continues to serve as an important complementary investigation in selected situations. It is particularly useful in virginal adolescents, women with MRKH syndrome, complex cervical or vaginal anomalies, OHVIRA syndrome, Robert uterus, and cases in which sonographic evaluation is limited by large pelvic masses, severe adenomyosis, poor acoustic windows, or equivocal findings.⁴ MRI also provides superior assessment of associated urinary tract anomalies and complex pelvic anatomy, making it particularly valuable for comprehensive preoperative planning.

CONCLUSION

3D USG has revolutionized the diagnosis and management of Mullerian anomalies. Its ability to accurately evaluate the uterine cavity, external fundal contour, cervix, and upper vagina enables precise classification according to the ASRM Mullerian Anomalies Classification (MAC 2021) and guides individualized management. In adolescents, it facilitates early diagnosis of obstructive anomalies, while in reproductive-age women it reliably differentiates septate from bicornuate uterus, thereby directing appropriate treatment. Although MRI remains indispensable in selected complex cases, three-dimensional ultrasonography has become the cornerstone of contemporary evaluation of Mullerian anomalies and should be considered the first-line imaging modality in routine clinical practice.

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ASSOCIATION OF OBSTETRICIANS AND GYNAECOLOGISTS OF DELHI (AOGD)



In loving Memory of

Dr. Biplab Mukhopadhyay

An outstanding laparoscopic gynecologist, a dedicated clinician, a compassionate human being.

ॐ

॥ **Om Shanti** ॥

We express profound grief at the untimely demise of a young budding gynaecologist and great human being. Our heartfelt prayers are with his family and loved ones during this difficult time. May his soul rest in eternal peace. Om Shanti

॥ **Om Shanti** ॥



Applications of 3D Ultrasound in Diagnosis and Management of fibroids

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INTRODUCTION

Uterine fibroids (leiomyomas) are the most common benign tumours of the female reproductive tract, affecting approximately 50–80% of women during the reproductive years.¹ Although >50% fibroids remain asymptomatic, the symptomatic ones may present with heavy menstrual bleeding (HMB), dysmenorrhea, pelvic pain, infertility, recurrent implantation failure, recurrent pregnancy loss, pressure symptoms and obstetric complications.

Management of fibroid depends upon presenting symptoms, age, parity and future fertility desire of patient. Detailed fibroid mapping plays a crucial role in planning the individualized treatment. The process of determining the size, number, location, vascularity, and relationship of fibroids to the endometrial cavity and serosal surface is referred to as “fibroid mapping.”²

Conventional two-dimensional ultrasonography (2D USG) remains the first-line imaging modality because of its accessibility, real-time imaging capability and cost-effectiveness, but its utility is limited in accurately assessing multiple fibroids, hybrid lesions, and precise relationship of fibroids to the endometrial cavity. Three-dimensional ultrasound (3D USG) has emerged as a major advancement in fibroid mapping and has significantly brought down the referrals for MRI and diagnostic hysteroscopy procedures.

PRINCIPLES OF 3D ULTRASOUND

Three-dimensional transvaginal sonography (3D-TVS) enables acquisition and reconstruction of volumetric datasets, allowing simultaneous visualization of uterus in sagittal, transverse, and coronal planes. As compared to 2D TVS, this multiplanar assessment by 3D TVS has superior sensitivity for accurate localization of fibroids and precise delineation of their relationship with endometrial cavity.

CLASSIFICATION OF FIBROIDS AS PER FIGO GRADING.

FIGO has classified fibroids according to their location and relation to endometrial cavity (Figure1) which has been revolutionised with availability of 3-D TVS providing accurate localization of fibroids, their number and assessment of their relationship to the endometrial cavity.

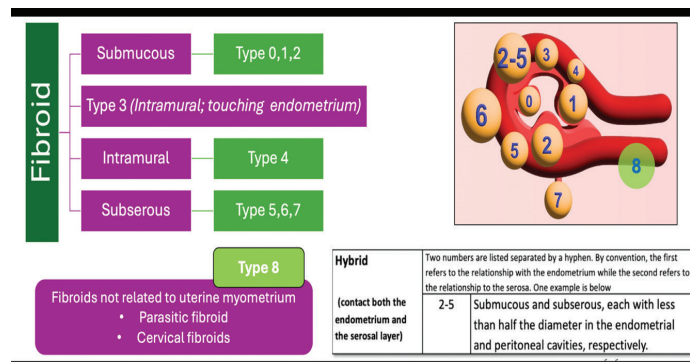


Figure 1. Showing FIGO Classification of Uterine Fibroids

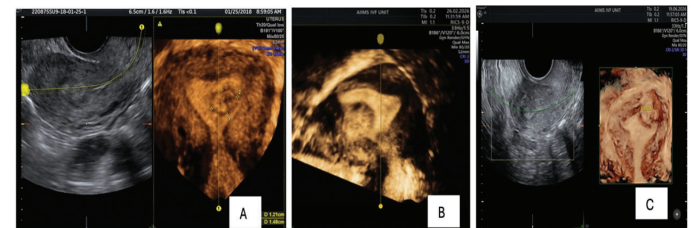


Figure 2. demonstrates utility of 3D TVS in the evaluation of submucosal fibroids facilitating accurate classification and deciding the route of surgical approach.

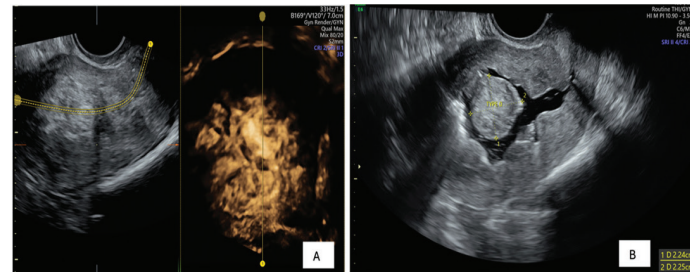


Figure 3. (A and B) illustrates the complementary role of saline infusion sonography (SIS) in cases where degree of intracavitary extension is uncertain.

Figure 4 illustrates different types of intramural and hybrid fibroids thus highlighting the role of 3D TVS in guiding individualized management based on patient's symptoms and precise location of fibroid. Figure 5 demonstrates 2-D, 3-D TVS and intra-operative findings of a large cervical fibroid. This case highlights the value of 3D TVS in defining the origin and extent of complex FIGO Type 8 fibroids and their relation to cervical canal. As the cervical canal is anterior to the fibroid bulge, the myoma resection was done through a posterior incision thus preserving the cervical canal and precise dissection.

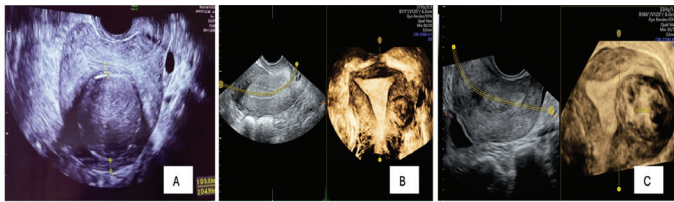


Figure 4. (A) FIGO Type 4 fibroid; (B) Type 5 and (C) hybrid Type 2-5 fibroid

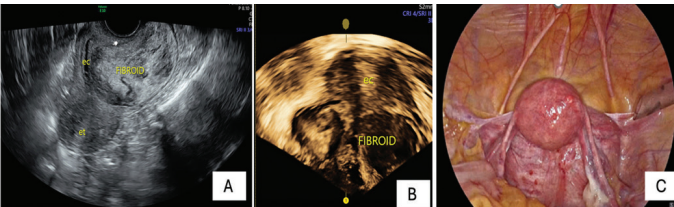


Figure 5. (A)- 2-D TVS showing large cervical fibroid posterior to the cervical canal; (B)- 3-D image of the same fibroid; (C)- Laparoscopic view showing large cervical fibroid demonstrating the classical "Lantern of St. Paul's dome" appearance

DIFFERENTIATION FROM OTHER UTERINE PATHOLOGIES

With advanced diagnostic criteria and good resolution facilities, it is possible to differentiate fibroids from adenomyosis, endometrial polyps, and congenital uterine anomalies (Figure 6). Most of these differentiations are possible on USG and MRI is needed only when features are complex and clear diagnosis not possible.

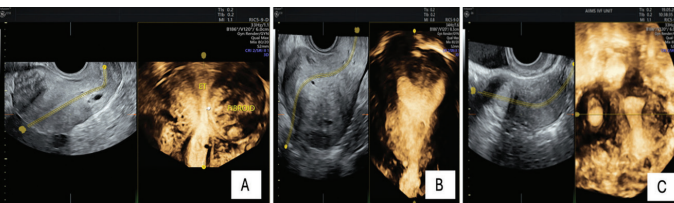


Figure 6. (A) Fibroid with a well-circumscribed margin and preserved junctional zone; (B) Adenomyosis characterized by junctional zone irregularity, myometrial cysts and echoes with focal or diffuse myometrial involvement and (C) ACUM as a separate well cavitated lesion within the myometrium with a normal uterine cavity and external contour

3D POWER DOPPLER IN FIBROID ASSESSMENT

3D power Doppler provides detailed assessment of fibroid vascular architecture, including peripheral and central vascularity, vascular indices, and blood flow distribution. It may aid differentiation of benign from suspicious lesions and can objectively monitor vascular changes following medical therapy or uterine artery embolization (UAE).

3D VOLUMETRIC FIBROID LOCALIZATION TOOL

In a standard fibroid mapping study, the doctor has to identify each fibroid, measures its size manually, identify its location and classifies it as submucosal, intramural, or subserosal. The advanced 3D volumetric fibroid localization

tool recreates 3D structure of the uterus and endometrial cavity, marks and numbers individual fibroids and show the exact spatial relationship between fibroids and the cavity along with volume of each fibroid (Figure 7). This is particularly important for women with fibroids presenting with infertility, recurrent implantation failure. This aids in triaging the medical vs surgical intervention, pre-surgical planning and expected post-surgical outcomes.

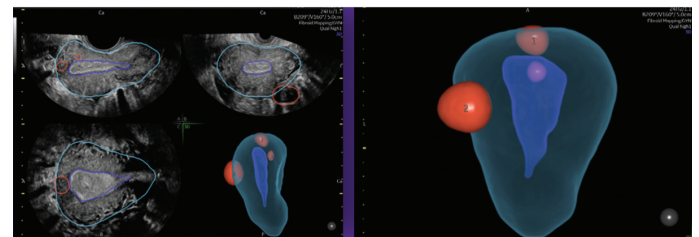


Figure 7. Advanced 3D volumetric fibroid localization tool

3-D TVS AS A SUBSTITUTE OF DIAGNOSTIC HYSTEROSCOPY FOR INFERTILE WOMEN

Initially all the infertile women especially those going for IVF were subjected to diagnostic hysteroscopy before embryo transfer. With the availability of 3-D TVS, the routine use of hysteroscopy before IVF is no longer recommended. 3D TVS provides a reliable, non-invasive alternative for detecting intracavitary pathology such as fibroids and polyps and helps to plan precise and complete surgical resection without damaging the endometrium (Figure 8).

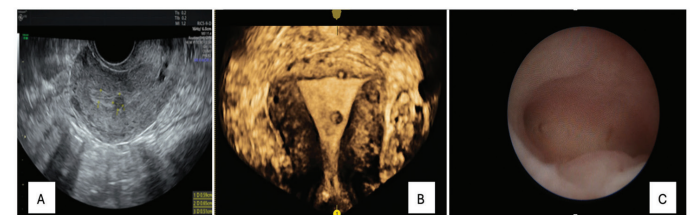


Figure 8 (A and B) 2D and 3D TVS images of a woman during pre-IVF evaluation showing a small posterior wall FIGO type 1 fibroid; (C) hysteroscopic findings corroborating the 3D TVS findings of a small posterior wall FIGO Type 1 submucosal fibroid

DECISION OF SURGICAL APPROACH

For all symptomatic fibroids, 3D TVS helps in superior fibroid mapping which is particularly valuable in cavity distorting and hybrid myomas, where the degree of cavity involvement directly influences management decisions (Figure 2 and Figure 4). Accurate preoperative mapping facilitates selection of the most appropriate surgical approach, helps anticipate surgical complexity, and minimizes the risk of endometrial cavity breach during fertility-preserving procedures. Basic parameters to assess the surgical approach for fibroids are:

- All type 0 and 1 fibroid- through hysteroscopic route
- Type 2- Up to 3-4 cm can be managed through hysteroscopy and it is advisable to choose the laparoscopic route for >4 cm size to ensure complete

resection, although some experienced surgeons can manage through hysteroscopic route.

- Small type 3 myoma (upto 2cm) may also be managed through hysteroscopic route by the experienced clinicians. But TVS and 3-D mapping helps to decide the precise site of incision without unnecessarily injuring the endometrium. This requires very close imaging and surgical precision in experienced hands.
- All type 3 (especially >2cm) and all intramural- through abdominal (laparoscopy, robotic or open) approach

ROLE IN FOLLOW UP AFTER TREATMENT

Compared with conventional diameter-based measurements in 2D TVS, 3D ultrasound provides more accurate and reproducible volumetric assessment of fibroids, enabling reliable monitoring of growth and treatment response. Automated volume calculations reduce interobserver variability and improve follow-up accuracy over time. This is particularly useful for :

- Assessing fibroid growth during follow-up and evaluating response to medical therapies and the extent of infarction after uterine artery embolization (UAE).
- Assessment of residual fibroids following hysteroscopic or laparoscopic myomectomy, along with endometrial cavity integrity and myometrial scar healing, which is particularly important in women desiring future fertility.

LIMITATIONS

Despite its advantages, 3D ultrasound has certain limitations:

- Operator dependency
- Reduced image quality in obesity
- Difficulty in extremely large uteri (>14 weeks size) and large myomas
- Motion artifacts during acquisition
- Limited field of view compared with MRI

Indications of MRI for fibroids – Although reduced indications, MRI still has its role in detailed fibroid mapping where 3-TVS can't produce complete information.

INDICATIONS OF MRI ARE:

- Large uterus especially with multiple fibroids and other locations of fibroids**
 - MRI is particularly valuable when ultrasound assessment is limited by uterine size or multiplicity of lesions. It provides comprehensive fibroid mapping and accurately delineates their relationship to the endometrial cavity, serosa, and adjacent pelvic structures (Figure 9).

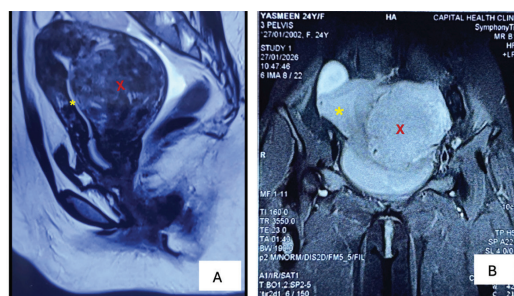


Figure 9. Figure 9: (A)-T2-weighted MRI demonstrating a large posterior wall intramural fibroid causing marked enlargement and distortion of the uterine contour; (B)- Pseudobroad ligament fibroid.

b. Uncertain diagnosis

- MRI is useful when ultrasound findings are inconclusive or when coexisting pathologies are suspected.

c. Pre-procedural planning

- MRI provides comprehensive fibroid mapping and precise delineation of their relationship to the endometrial cavity and adjacent pelvic organs, thereby facilitating planning of UAE, MR-guided focused ultrasound surgery (MRgFUS), or complex myomectomy.

d. Suspicion of sarcomatous change

- Rapid growth, postmenopausal enlargement, heterogeneous appearance, irregular borders, extensive necrosis, or atypical Doppler findings may warrant further evaluation with MRI.

CONCLUSION

- 3D ultrasound has transformed fibroid diagnosis and management by improving cavity assessment, surgical planning, fertility evaluation and post treatment monitoring.
- Detailed fibroid mapping using 3-D TVS should be incorporated for counselling and planning all the women consulting for fibroids and related clinical symptoms.
- It is a highly effective and accessible imaging modality in modern gynecology which should be incorporated in training modules for practicing clinicians including post-graduate students.

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Probe at the Bedside: Point of Care Ultrasound in Gynaecology

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INTRODUCTION

The practice of gynaecology is increasingly moving toward rapid, bedside decision-making. In this context, point of care ultrasound (POCUS) has emerged as a transformative tool, which allow clinicians to integrate imaging directly into clinical assessment.¹ Key characteristics of POCUS are focused, real time, repeatable and clinically integrated.² In gynaecology, POCUS aids in the assessment of acute pelvic pain, abnormal uterine bleeding, and postoperative complications, while also facilitating guidance during bedside procedures.³

PROBE SELECTION

For transabdominal pelvic imaging (3-3.5MHz), a moderately full bladder serves as an acoustic window by displacing bowel loops and improving visualisation of the uterus and adnexa. In contrast, transvaginal ultrasound (5-9MHz) is best performed with an empty bladder, which allows closer approximation of the probe to pelvic structures and provides superior resolution.⁴ Different types of probes are shown in Figure 1.

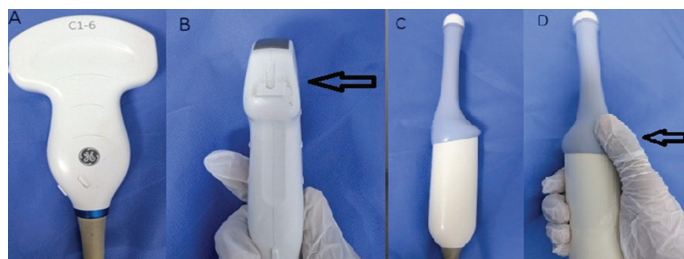


Figure 1. Ultrasound probes and handling technique for gynaecological POCUS.

(A) Curvilinear transabdominal (TAS) probe used for pelvic overview and assessment of free fluid. (B) Orientation marker on the probe (arrow). (C) and (D) Transvaginal probe demonstrating orientation marker and appropriate hand positioning for probe control.

MACHINE SETTINGS (KNOBOLGY BASICS)

Efficient manipulation of ultrasound machine settings, often termed as “knobology” is essential in POCUS, particularly when time is limited. A few targeted adjustments can significantly improve image quality and diagnostic confidence without prolonging scan time.⁵

A. Depth: It determines the extent of tissue visualised and structure of interest should be centred to occupy approximately two thirds of the screen, avoiding

unnecessary empty space while maintaining adequate surrounding anatomical context. A practical bedside approach is to begin with greater depth to obtain a global pelvic survey and subsequently reduce the depth once to visualise the uterus or adnexa.⁵

B. Gain: It controls the overall brightness of the ultrasound image. The aim is to obtain a balanced grayscale image in which fluid containing structures appear anechoic (black) e.g. Bladder, while soft tissues are displayed in varying shades of grey.⁵ (Figure 2)

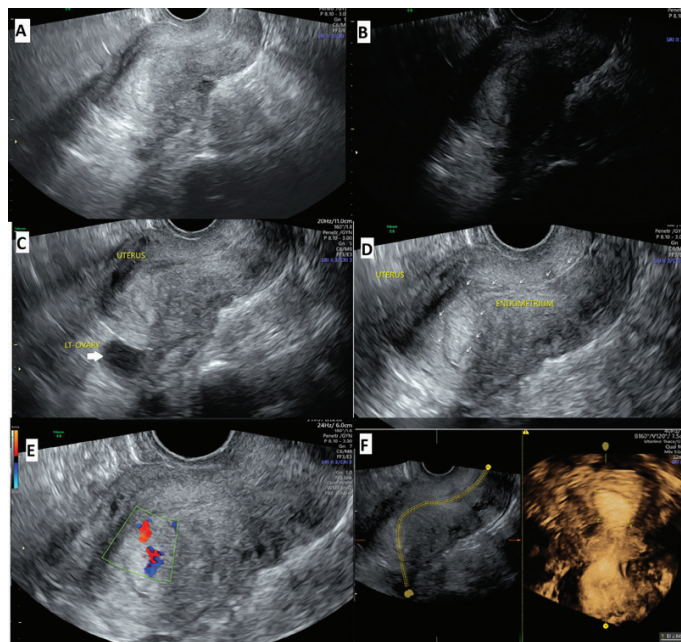


Figure 2. Stepwise optimisation of TVS imaging in evaluation of intracavitary pathology.

(A) Excessive gain resulting in an overly bright image with reduced tissue differentiation. (B) Reduced gain producing a darker image with suboptimal visualisation. (C) Optimised gain and depth settings, with the uterus occupying two-thirds of the screen, allowing improved visualisation of pelvic anatomy and ovary stuck to posterior surface of uterus. (D) Optimized depth & Zoom showing endometrial polyp within the endometrial cavity. (E) Colour Doppler demonstrating vascularity at the site of polyp and (F) 3 D TVS confirming an endometrial polyp.

C. Focus and Zoom

Focus determines the area of highest image resolution and should be placed at or just below the structure of interest to improve image clarity, particularly during assessment of adnexal pathology and early

pregnancy.^{6,7} Zoom should be used after optimising depth and not as a substitute for it.⁶ (Figure 3)

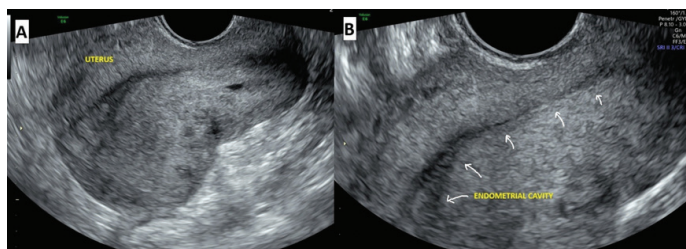


Figure 3. Optimisation of depth, focus, and zoom during transvaginal POCUS (A) Appropriate depth and focal adjustment to visualise uterus, feature of Adenomyosis [uterus posterior wall thickened] (B) Subsequent application of zoom to provide magnified assessment of the endometrial cavity. (No Intracavitary Pathology)

CLINICAL APPLICATIONS OF POCUS IN GYNAECOLOGY

POCUS in gynaecology is specifically useful in emergency situations, and it is also increasingly used for diagnostic, procedural and monitoring purposes. Despite having many advantages, the relevance of results is dependent on operator expertise. It is not a substitute for a conventional RADUS (radiologist performed ultrasound) which provides a detailed comprehensive examination but has limitations of non-feasibility of shifting the patient and delays in transport and reporting.

A. Ectopic Pregnancy

Ectopic pregnancy remains a leading cause of first trimester maternal morbidity and mortality, and early diagnosis is critical in its timely management. POCUS allows rapid identification of an intrauterine pregnancy (IUP), which, in most cases, effectively excludes ectopic pregnancy except in rare heterotopic scenarios. While absence of an intrauterine gestational sac with β hCG >1500–2000 IU/L suggests ectopic pregnancy, the higher ACOG discriminatory zone of 3500 mIU/mL is more specific for early intrauterine pregnancy yet most ectopic occur below this threshold.

Typical POCUS findings in tubal ectopic is an adnexal mass separate from ovary (tubal ring), free fluid in pouch of Douglas (in case of ruptured ectopic). Colour Doppler may show “ring of fire” (not specific, also seen in corpus luteum). Moderate to large free fluid in Morrison’s pouch suggests rupture, requiring urgent surgery (Figure 5).

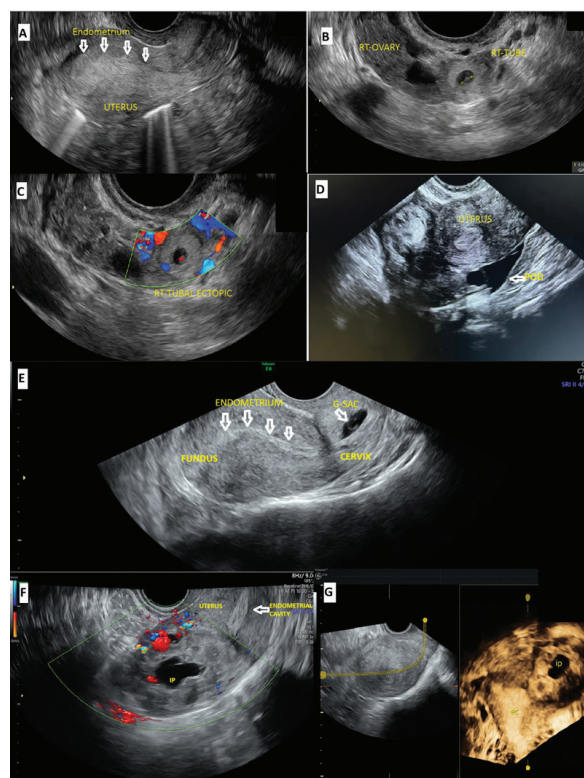


Figure 4. POCUS in ectopic pregnancy. (A) TVS demonstrating an empty uterine cavity with thickened endometrium and absence of an intrauterine gestational sac. (B) Right adnexal ectopic gestational sac with fetal pole visualised separately from the ovary. (C) Colour Doppler evaluation showing peripheral vascularity (“ring of fire” appearance) (D) Case of ruptured ectopic with hemoperitoneum and collection in POD. (E) Cervical ectopic pregnancy: gestational sac implanted within the endocervical canal below the internal os, with no intrauterine pregnancy seen. (F–G) Interstitial ectopic pregnancy. (F) Eccentric gestational sac in the fundal myometrium separate from the endometrial cavity. (G) Interstitial line sign (echogenic line from endometrium to sac) with empty uterine cavity, confirming interstitial pregnancy.

In ovarian pregnancy, ultrasonography typically shows a *hyperechoic ring within or on the ovary* with clear adjacent parenchyma and no tubal connection, often hard to distinguish from a corpus luteum and ring echogenicity greater than the ovary itself. A cornual pregnancy (intramural) is often used interchangeably but strictly refers to implantation in the rudimentary horn of a bicornuate or septate uterus. For a cervical pregnancy, the gestational sac is implanted below the internal os, with absent “sliding sign” (sac moves minimally against the cervix with probe pressure) and a characteristic “hourglass” uterine shape on sagittal view.

B. Ovarian Torsion

POCUS plays an important role in acute abdomen or pelvic pain particularly in suspected ovarian torsion. Doppler assessment can demonstrate reduced or absent venous flow; however, arterial flow may be preserved in early stages due to dual blood supply. Therefore, *normal Doppler*

findings do not exclude torsion, and imaging findings must always be interpreted in conjunction with clinical presentation.

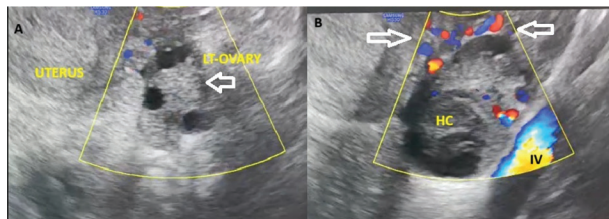


Figure 5. POCUS in ovarian torsion. (A) Transvaginal ultrasound showing an enlarged left ovary with peripherally displaced follicles (arrow) and increased stromal echogenicity. (B) Colour Doppler image showing a whirlpool sign (arrows) [representing twisting of the ovarian vascular pedicle] and associated haemorrhagic cyst (HC) [IV-Iliac Vessels].

C. Acute Pelvic Pain

The SHARP examination is a focused bedside ultrasound approach designed for patients presenting with right-sided abdominal pain. The acronym guides rapid assessment of key pathologies, including [S] size of ovary (ovarian enlargement), [H] hydronephrosis, [A] appendicitis, free fluid in the [R] right upper quadrant, and [P] pregnancy related conditions.(15) POCUS facilitates initial differentiation of causes of acute pelvic pain (Figure 6)

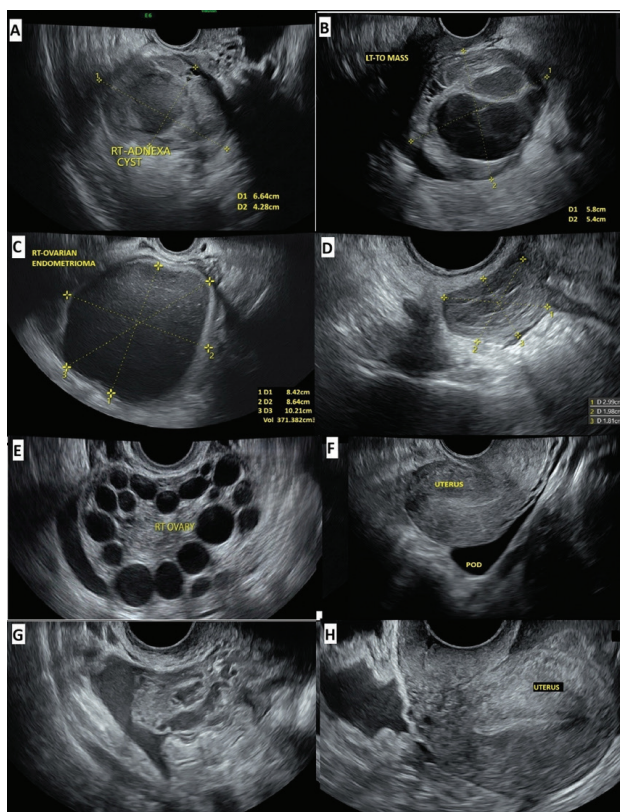


Figure 6. POCUS in Acute Pelvic Pain (A-F). (A) Right adnexal anechoic to hypoechoic mass, consistent with tubo ovarian abscess (TOA). (B) Another TOA thick-walled and multiloculated. (C) Large cyst with homogenous ground glass echogenicity suggestive

of endometrioma. (D) Haemorrhagic Cyst, giving a “cogwheel” appearance (E) Ovarian Hyperstimulation case- multiple enlarged follicles (F) OHSS patient with Minimal free fluid in pouch of Douglas (POD) behind uterus. (G) Ruptured ectopic pregnancy: complex echogenic free fluid in pelvis suggestive of hemoperitoneum (H) Empty uterus surrounded by echogenic free fluid (Hemoperitoneum).

D. Postoperative Assessment

POCUS is particularly valuable in the early postoperative period for rapid bedside evaluation of complications. In symptomatic patients, targeted assessment should focus on detection of collections, which may represent hematoma or abscess. Hematomas typically appear echogenic or mixed, while abscesses are more likely to demonstrate complex fluid with internal debris or septations. The presence and extent of free fluid should also be assessed. Additionally, evaluation of the urinary bladder may help identify retention or injury. Early identification of such findings enables prompt escalation of care.

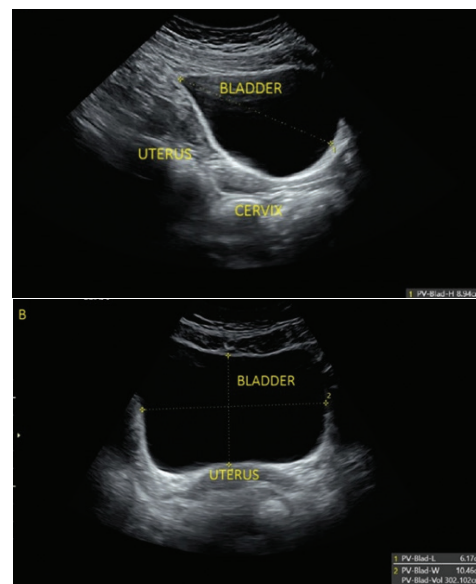


Figure 7. POCUS assessment of urinary retention using bladder volume estimation.

(A) Sagittal transabdominal ultrasound view demonstrating measurement of bladder height, with the uterus and cervix visualized posterior to the bladder. (B) Transverse transabdominal ultrasound view demonstrating measurement of bladder width and depth. These dimensions were used to calculate bladder volume using the standard ellipsoid formula ($\text{Height} \times \text{Width} \times \text{Depth} \times 0.52$), yielding an estimated bladder volume of approximately 302 mL.

After prolonged surgery for malignancy, POCUS enables rapid bedside assessment of critical complications. Specially to assess hydration status by measuring Inferior Vena Cava diameter (>21mm) or to rule out deep venous thrombosis by testing venous compression. POCUS avoids moving an unstable patient from the ICU, expedite management decisions, and reduce length of stay in the ICU.

- E. Abnormal uterine bleeding:** Enables rapid bedside assessment of endometrial thickness and identification of gross intracavitary lesions (e.g. polyps, submucosal fibroids), facilitating early triage.

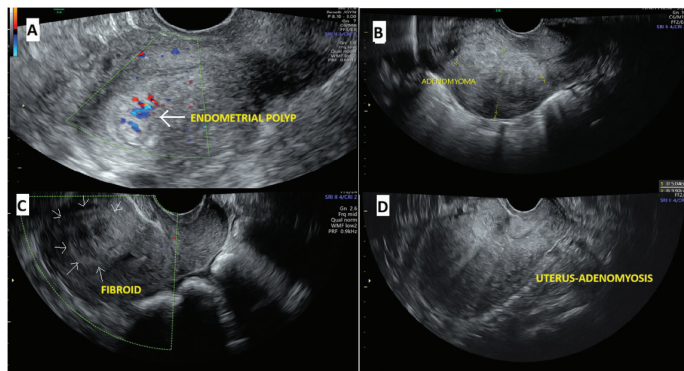


Figure 8. POCUS in AUB. (A) Endometrial polyp with vascularity on colour Doppler. (B) Focal adenomyoma appearing as a heterogeneous ill-defined myometrial lesion. (C) Type 1 submucosal fibroid distorting and splaying the endometrial cavity. (D) Diffuse adenomyosis showing a heterogeneous myometrium with myometrial cysts and poorly defined endometrial–myometrial junction (EMJ).

- F. Intrauterine device (IUD) evaluation:** Provides a quick, reliable method to confirm correct positioning or identify malposition/expulsion, especially in patients presenting with pain or missing threads.

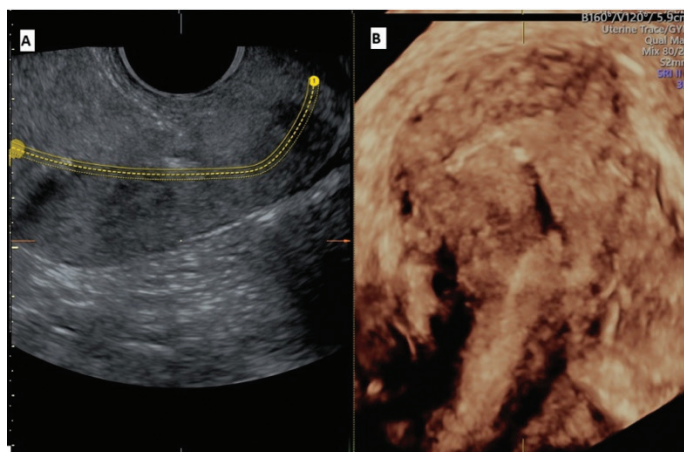


Figure 9. TVS assessment of IUD position. (A) 2D TVS demonstrating an echogenic linear structure within the endometrial cavity consistent with IUD. (B) 3D TVS providing further confirmation of IUD position where available.

G. POCUS for Procedural Guidance in Gynaecology

POCUS provides real time, needle guidance that increases first pass success and reduces complications during bedside procedures. For paracentesis or for cyst/abscess drainage, ultrasound identifies the largest pocket of ascites away from bowel and bladder, measures skin to fluid distance, and marks a safe trajectory.(20,21)

KEY POINTS

- POCUS facilitates rapid bedside diagnosis in gynaecological practice/ emergencies.
- It guides safer bedside procedures and supports postoperative monitoring.
- Image quality and operator expertise are critical determinants of diagnostic accuracy.
- It enhances clinical decision making but complements, rather than replaces, formal radiological ultrasound.

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Adnexal Enigma: A Structured Approach to Adnexal Lesions

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INTRODUCTION

Adnexal masses comprise a heterogeneous group of lesions arising from ovary, fallopian tube, or adjacent pelvic tissues. Most of these masses are detected incidentally during imaging, while others may present with pelvic pain, abdominal distension, or other gynecological symptoms. Although the majority are benign, distinguishing them from malignant lesions remains a critical clinical objective as management strategies range from routine surveillance to extensive surgical intervention.¹

Ultrasound (USG) is the primary imaging modality for the evaluation of adnexal masses being non-invasive, widely available, cost-effective, and highly accurate. It has a sensitivity ranging from 88% to 100% and specificity varies from 62% to 96% as it is highly operator-dependent. Modern assessment relies on pattern recognition, whereby characteristic sonographic features are correlated with specific pathologies, enabling accurate lesion characterization and risk stratification.¹

To improve diagnostic consistency several standardized systems have been developed, including the IOTA Simple Rules, ADNEX model, GI-RADS, and O-RADS. This chapter outlines a structured USG-based approach to adnexal lesions, reviews the key sonographic features of common adnexal masses, and discusses the role of contemporary risk stratification systems in diagnosis and management.

ROLE OF IMAGING IN ADNEXAL MASS EVALUATION

Accurate evaluation of adnexal masses requires standardized USG assessment. Transvaginal USG (TVS) provides superior spatial resolution, better characterization of internal morphology, vascularity, septations, papillary projections, and solid areas compared with transabdominal USG. TVS remains complementary, particularly for large masses. The International Ovarian Tumour Analysis (IOTA) Group developed standardized terminology for adnexal lesions which form the basis of risk stratification systems including as shown in Table 1.²

Table 1: Ultrasound Descriptors used in evaluation of adnexal lesions²

Parameter	Description
Septum	Strand of tissue extending between opposing cyst walls or between two septa within a lesion. (Figure 1A)

Incomplete Septum	Septum that does not reach the opposite wall, seen in hydrosalpinx
Solid Component	Echogenic area measuring ≥ 3 mm; excludes blood clots, mucus, sludge, hair, and sebaceous material.
Papillary Projection	Solid tissue protruding into a cyst cavity with height ≥ 3 mm. Protrusions < 3 mm high but with base ≥ 3 mm are classified as solid components. (Figure 1B)
Measurement of Papillary Projections	Record projection height, base 1, and base 2; wall/septal thickness is excluded.
Valley Depth	Indentation between adjacent papillary projections. Valley depth $\geq 50\%$ of the lower projection height indicates a single projection; $< 50\%$ indicates separate projections. Used for standardisation of papillary projection counting
Inner Wall Characteristics	May be smooth or irregular. Any solid protrusion into the cyst cavity renders the wall irregular.
Outer Wall Characteristics	Considered irregular when solid tissue extends externally from the cyst surface.
Acoustic Shadowing	Attenuation of USG beam by internal structures producing posterior shadows, commonly seen in dermoid cyst (Figure 1C)
Ascites	Free fluid outside the pouch of Douglas, between uterus and bladder, or in Morrison's pouch.

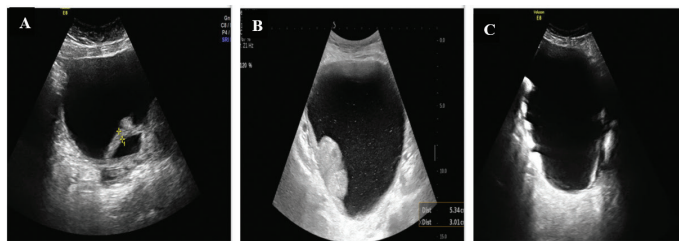


Figure 1: Ultrasound image showing (A) Bilocular cyst with septation with maximum thickness 6.7mm and classified as thick septation, (B) Papillary projections (defined as any solid component arising from inner wall > 3 mm in height) and (C) Calcifications, seen as hyperechoic areas in adnexal mass with posterior acoustic shadowing.

PRINCIPLES OF MEASUREMENT OF ADNEXAL MASSES

As per IOTA, lesions should be assessed in two perpendicular planes with measurements recorded in millimetres, with

cyst wall included in the measurement. Lesions separate from the ovary, such as hydrosalpinx or para-ovarian cysts are measured independently from the ovary.² Based on the presence or absence of septations and solid components, ovarian masses can be classified into five morphological categories:

- **Unilocular cyst** – A cystic lesion without septations or solid components.
- **Unilocular solid cyst** – A unilocular cyst containing one or more solid components.
- **Multilocular cyst** – A cystic lesion containing one or more septa but lacking any solid components.
- **Multilocular solid cyst** – A multilocular cyst that contains one or more solid components.
- **Solid tumour** – A predominantly solid lesion in which solid tissue constitutes at least 80% of the tumour volume when assessed on a two-dimensional US section.

Several benign adnexal lesions demonstrate characteristic sonographic appearances that allow a confident diagnosis based on pattern recognition alone:

- A. Simple Cysts:** These are usually physiological and self-limiting, although larger persistent cysts may represent benign neoplasms such as serous cystadenomas.³

USG Features of Simple Cyst- Unilocular cyst; anechoic contents; thin, smooth wall; no septations, papillary projections, or solid components and no internal vascularity.

- B. Haemorrhagic Cysts:** These are caused by bleeding into a follicular or corpus luteum cyst, and resolve spontaneously over time.

USG Features of Haemorrhagic Cyst- Complex cystic lesion with internal echoes; retracting avascular clot; reticular, cobweb, fishnet, or lace-like pattern due to fibrin strands; absence of internal doppler flow and free pelvic fluid may be present if ruptured.

- C. Mature Cystic Teratoma (Dermoid Cyst):** These are the most common benign ovarian germ cell tumours and are frequently seen in adolescents and reproductive-age women.

USG Features of Dermoid Cyst: Hyperechoic mass with posterior acoustic shadowing; Rokitansky nodule (dermoid plug); dermoid mesh sign (multiple echogenic lines from hair); fat-fluid levels; calcifications, teeth, or bone producing dense shadowing and minimal internal vascularity (Figure 2A).

- D. Endometrioma:** These are ovarian cysts arising from endometriosis and contain altered blood products. Atypical appearances may occur, particularly in chronic lesions.

USG Features of Endometrioma: Unilocular/multilocular cyst; homogeneous low-level internal echoes; classic "ground-glass" appearance; bilaterality is common; and apparent mural nodules usually represent avascular blood clots (Figure 2B).

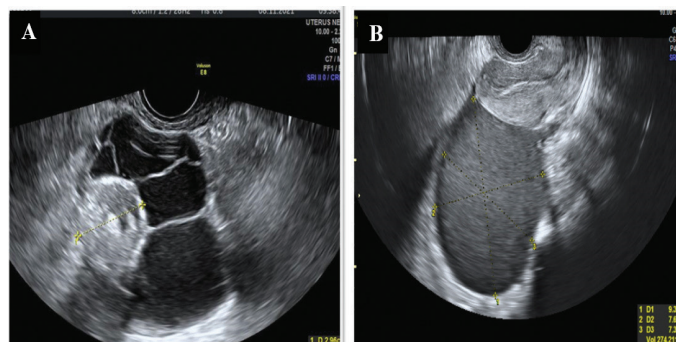


Figure 2: Ultrasound showing (A) Multiloculated cystic lesion with dermoid plug and (B) Depicting a well-defined cystic lesion with ground glass opacity characteristic of endometrioma.

ROLE OF COLOUR DOPPLER

Colour Doppler assessment of vascularity improves characterization of adnexal masses by evaluating tumour angiogenesis. Malignant lesions typically demonstrate central low-resistance blood flow with low resistive index (RI) and pulsatility index (PI) values and absent diastolic notch, whereas benign lesions usually show peripheral, higher-resistance vascularity. Angle-independent Doppler indices such as RI and PI are therefore useful adjuncts in risk stratification. The IOTA system uses a subjective semiquantitative colour score (CS):

Colour Score	Vascularity
1	No flow
2	Minimal flow
3	Moderate flow
4	Very strong flow

The score applies to the lesion as a whole. The highest degree of vascularity within any part of the lesion determines the overall CS (Figure 3). Even a single highly vascularized papillary projection results in a CS of 4.¹

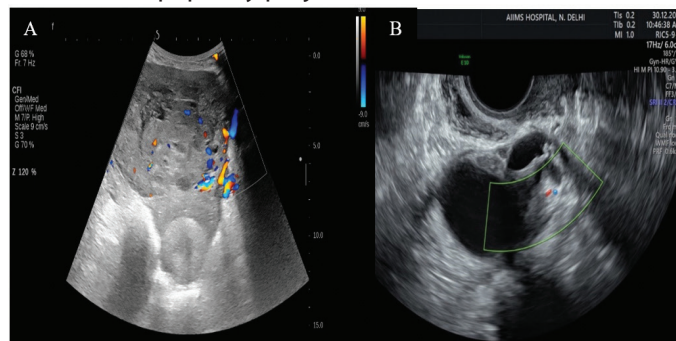


Figure 3: Ultrasound depicting (A) Solid lesion with colour score 4 highly suggestive of malignancy and (B) Solid lesion with no vascularity depicting to colour score 1.

ULTRASOUND REPORTING SYSTEMS

The Risk of Malignancy Index (RMI) was one of the earliest USG-based models for preoperative assessment of adnexal masses, combining USG features, menopausal status, and serum CA125 levels. RMI values >200–250 are considered suggestive of malignancy; however, its accuracy is limited for complex lesions and early-stage cancers.³

To improve standardization, the International Ovarian Tumour Analysis (IOTA) group developed the Simple Rules, classifying sonographic features into benign (B-rules) and malignant (M-rules) as shown in Table 2. Lesions are categorized as benign when only B-features are present, malignant when only M-features are present, and inconclusive when both coexist. The model demonstrates high diagnostic accuracy, with a sensitivity of 93% and specificity of 90%.¹

Table 2. IOTA Simple Rules: Benign (B) and Malignant (M) USG Features

"B" rules	"M" rules
Unilocular cysts	Irregular solid tumour
Presence of solid components when the largest solid component <7 mm	Ascites
Presence of acoustic shadowing	At least four papillary structures
Smooth multilocular tumour with a largest diameter <100 mm	Irregular multilocular solid tumour with largest diameter >100 mm
No blood flow	Very strong blood flow

The Ovarian-Adnexal Reporting and Data System (O-RADS), introduced by the American College of Radiology in 2018 and updated in 2022, is a standardized USG-based risk stratification system for ovarian and fallopian tube lesions.⁴ O-RADS applies to ovarian and fallopian tube lesions, while non-ovarian lesions are excluded except para-ovarian and peritoneal inclusion cysts. It has been summarized in Table 3.

Table 3. O-RADS classification of adnexal masses

Category	Risk of Malignancy	Management
O-RADS 0	Incomplete evaluation	Repeat USG or MRI
O-RADS 1	Physiologic	Normal premenopausal findings
O-RADS 2	<1%	Almost certainly benign; routine follow-up
O-RADS 3	<10%	Low-risk lesions; follow-up or surgery depending on clinical context
O-RADS 4	10–50%	Intermediate risk; expert USG/MRI and specialist referral
O-RADS 5	>50%	High risk of malignancy; gynaecologic oncology management

There have been updates in 2022 in O-RADS as summarised:

1. Cysts with a single smooth septation are now reclassified from to O-RADS 2 because of very low risk of malignancy (<1%).
2. Bilocular cysts with size ≥10 cm are classified as O-RADS 3 (<10% risk of malignancy) irrespective of CS.
3. Solid lesions with smooth outer contours and acoustic shadowing, suggestive of fibromas, are now classified as from O-RADS 4 to O-RADS 3 (<10% risk of malignancy).⁵

O-RADS is not applicable to ectopic pregnancy, pelvic inflammatory disease, or ovarian torsion, and MRI may be useful when lesion origin or characterization remains uncertain. In cases of bilateral or multiple lesions, each lesion is individually assigned a separate O-RADS category, with management guided by the lesion with highest risk score. O-RADS emphasizes the importance of menopausal status in risk stratification. Postmenopausal status is defined as amenorrhea for at least one year and is further classified into early (<5 years) and late (≥5 years). In women with uncertain menopausal status or prior hysterectomy, patients >50 years are managed as postmenopausal.⁴

KEY MESSAGES

- Adnexal masses should be measured in two perpendicular planes, with three orthogonal diameters recorded in millimetres.
- Lesions should be described using IOTA terms such as septae, solid components, papillary projections, wall irregularity, acoustic shadowing, ascites, and colour score as shown in Annexure 1.
- Colour Doppler should assess the whole lesion, with the highest vascularity determining CS.
- Each lesion should receive an individual risk category, with management guided by the highest-risk lesion using O-RADS/IOTA-based assessment.

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ANNEXURE 1: STRUCTURED USG REPORTING OF ADNEXAL MASSES

Patient's Name:

Age:

Clinical Unit:

Address:

Phone:

Hospital Registration Number (UHID):

History and clinical examination:

Symptoms	Yes/no	If yes, duration	Special remarks
Abdominal/ Pelvic pain			
Abdominal distension			
Significant weight loss (>10% in 6 months)			
Loss of appetite			
Any other symptoms:			

EXAMINATION

Pallor

Icterus

Cyanosis

Clubbing

Lymphadenopathy

Pedal edema

BMI:

Vitals:

Cardiovascular system :

Respiratory system:

Abdominal examination:

Per vagium examination:

Per rectum examination:

INVESTIGATIONS

- A. Complete blood count renal and,
- B. Renal function test
- C. Liver function test
- D. Chest X Ray PA view
- E. ECG/ECHO
- F. Tumour Markers:

CA-125:	
CEA	
CA 19-9	
Alpha feto-protein	
LDH	
BhCG	

ULTRASONOGRAPHY GREY SCALE US AND COLOUR DOPPLER

- 1. Location :
- 2. Category/ Lesion Type :
- 3. Size :
- 4. Descriptors of Lesion :
 - Composition
 - Shape
 - Margin
 - Extent
 - Echogenicity
 - Septae
 - Papillations
 - Calcifications
 - Peritoneal deposits
 - Ascites
 - Miscellaneous

- 5. Colour Score :

IOTA Score

ORADS score

Enhanced Myometrial Vascularity (EMV) and Vascular Retained Products of Conception (RPOC)- Diagnostic and Management Dilemmas and Role of Imaging

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INTRODUCTION

Uterine enhanced myometrial vascularity (EMV), also known as acquired arteriovenous malformations (AVM) is characterized by abnormal direct communications between arteries and veins without an intervening capillary network. It is a rare but potentially life-threatening event.¹ Although AVM can be congenital or acquired, most of the cases seen in clinical practice are acquired which usually develop after a previous uterine trauma in women of the reproductive age group.² The term used for acquired AVM is EMV regardless of the presence or absence of products of conception.³

ETIOPATHOGENESIS OF EMV

Acquired EMVs are usually associated with previous uterine trauma due to:

- Pregnancy event (abortion, caesarean section, vaginal delivery, molar pregnancy)
- Intrauterine procedures: Suction evacuation, uterine curettage
- Less common causes: Malignancy, infection, endometriosis, diethylstilbestrol exposure, and intrauterine devices.

Among these, abortion-related uterine instrumentation remains one of the most important risk factors.

CLINICAL PRESENTATION

Most common presenting symptom is abnormal vaginal bleeding following abortion or more commonly after uterine curettage procedure. Bleeding may range from intermittent spotting to sudden torrential haemorrhage resulting in hemodynamic instability. Some patients present with severe anaemia, recurrent bleeding episodes, or failure of symptoms to resolve after repeated curettage procedures. Less common presentations include:

- Pelvic pain due to local vascular congestion in the pelvic area, which can obstruct venous return, increase pelvic pressure, and stimulate the surrounding nerves.
- Acute pelvic pain due to rupture of EMV which irritates the peritoneum or causes thrombosis.
- Haemodynamics-related symptoms due to excessive

blood loss or high-output heart failure.

- Bladder symptoms (frequent urination and difficulty in urination) due to localised pressure on the bladder. Compression of the rectum can cause urgency, heaviness, and constipation.

The most important differential diagnosis of EMV is hypervascular retained products of conception. Other include gestational trophoblastic disease, caesarean scar pregnancy, pseudoaneurysm, and placental bed subinvolution.

Hypervascular retained products of conception (RPOC) refer to persistent placental or trophoblastic tissue in the uterine cavity with increased vascularity following miscarriage, abortion, vaginal delivery, or caesarean section. Due to overlapping features of EMV and vascular RPOC, the two conditions are commonly misdiagnosed as each other. Misdiagnosis of EMV as hypervascular RPOC may lead to repeated evacuation procedures, which further augment the EMV communications by damaging the endometrium. Life-threatening haemorrhage may lead to emergency hysterectomy and maternal morbidity and even mortality. Thus, it is important to differentiate EMV from hypervascular RPOC. In hypervascular RPOC, vascularity is usually centred within the endometrial cavity and associated with retained tissue, whereas EMV predominantly involves the myometrium with multiple serpiginous vascular channels.

DIAGNOSTIC EVALUATION AND DIFFERENTIATION OF EMV AND HYPERVASCULAR RPOC

Transvaginal scan with colour Doppler

Transvaginal scan with colour Doppler is the first-line imaging modality with high sensitivity and specificity to differentiate these two conditions with close clinical presentations (4). Increased uterine vascularity on sonography and Doppler may be present in both these conditions, which further complicates the differentiation. Table 1 describes the 2-D TVS and colour Doppler findings of EMV and hypervascular RPOC.

Table 1: Differentiating features of EMV and vascular RPOC on 2-D ultrasound and color Doppler

EMV	Hypervascular RPOC
● Gray-scale 2-D TVS- ill-defined inhomogeneous mass with multiple myometrial and endometrial hypoechoic cystic or tubular-like structures of variable sizes, along with focal or asymmetric endometrial and myometrial thickening (Figure 1 A-C). ● Color Doppler -intense multidirectional flow with a characteristic “mosaic” pattern caused by turbulent blood flow with abnormal fistulous communications between arteries and veins without intervening capillary network (Figure 1 D & E). ● Severity of EMV is measured by the velocity of blood flow in the lesion, and exhibits high peak systolic velocity (PSV) (> 20 cm/sec) (figure 1F), low-resistance flow (mean resistive index: 0.3), and low pulsatility of the arterial waveform.	● Most sensitive finding on Gray-scale TVS: thickened endometrium (>8-10mm) and/or an endometrial mass. ● Even though colour Doppler flow may be detected in hypervascular RPOC, there are no or minimal blood vessels extending into myometrium as shown in Figure 2. ● No abnormal fistulous communications between arteries and veins.

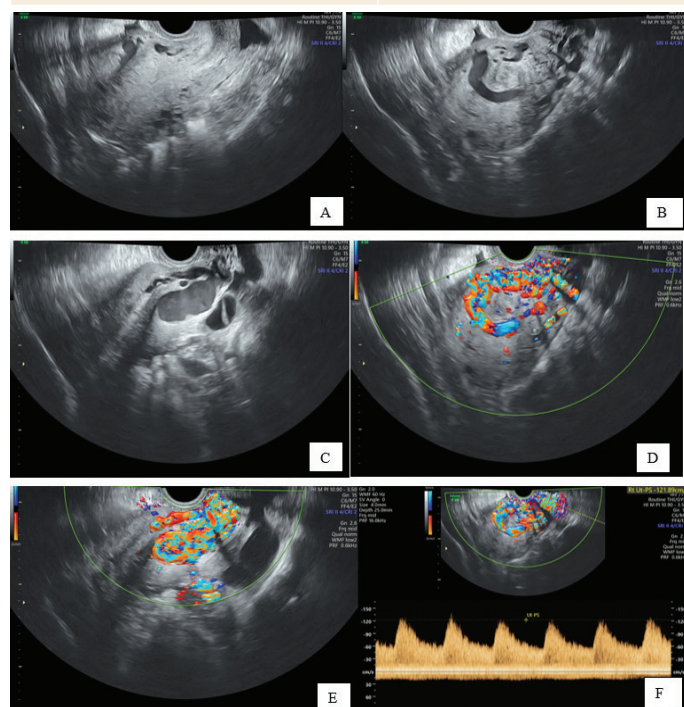


Figure 1: (A-C) Gray-scale transvaginal ultrasound demonstrating ill-defined inhomogeneous mass with multiple myometrial and endometrial hypoechoic tubular-like structures of variable sizes; (D & E) Color Doppler showing intense multidirectional flow with a characteristic “mosaic” pattern; (F) High peak systolic velocity (PSV) in EMV lesion

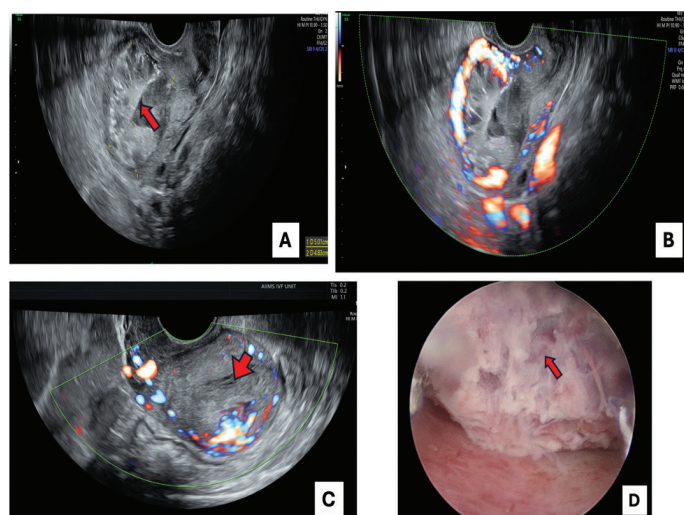


Figure 2: (A) TVS showing retained products of conception in the endometrial cavity (red arrow) and clear myometrial rim; (B & C) Color doppler showing increased vascularity in the lesion; (D) Hysteroscopic view showing large RPOC presenting as irregular whitish friable tissue (red arrow) adherent to the endometrial cavity.

MAGNETIC RESONANCE IMAGING

Magnetic resonance imaging (MRI) is useful when findings are inconclusive on TVS. MRI typically demonstrates serpentine, multiple flow voids within the myometrium and enlarged parametrial vessels which may protrude into uterine cavity. MRI also assists in pre-procedural planning before embolization.

DIGITAL SUBTRACTION ANGIOGRAPHY

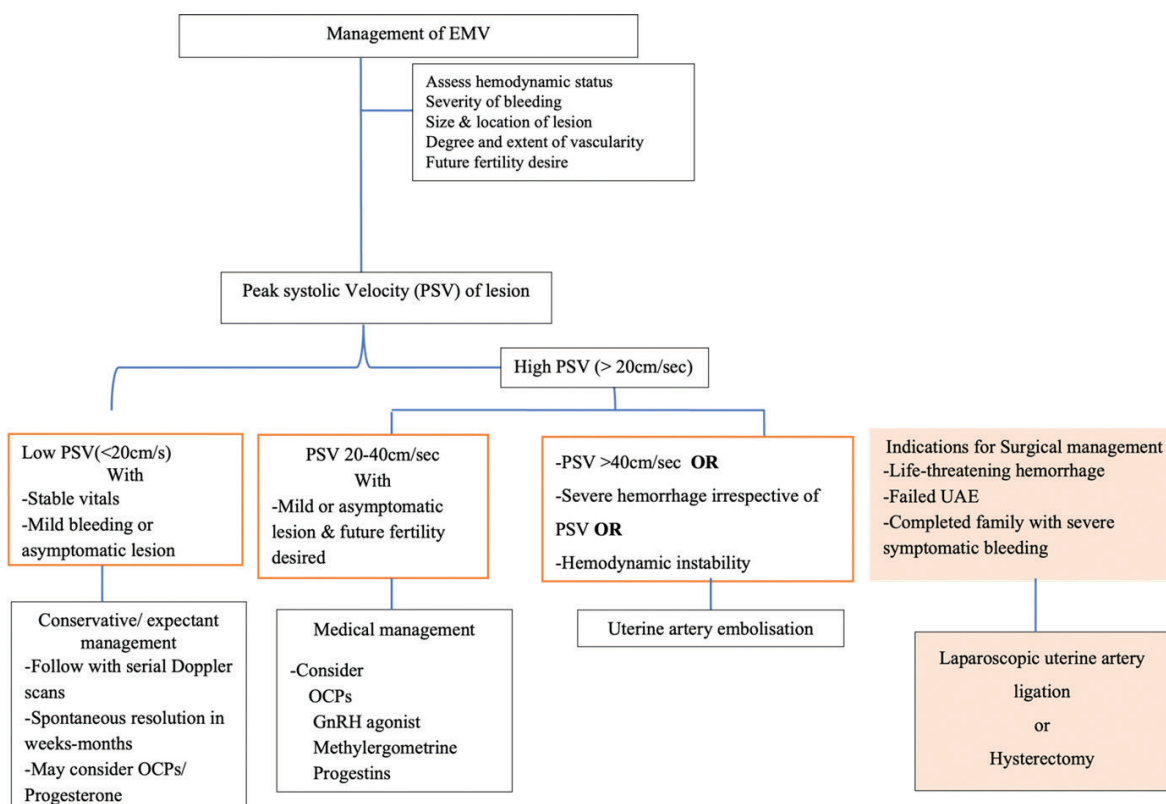
Digital subtraction angiography (DSA) remains the **gold standard** for definitive diagnosis. It demonstrates hypertrophied feeding arteries, rapid arteriovenous shunting, and early venous filling. DSA is mainly performed as part of uterine artery embolization rather than solely for diagnosis.

DIAGNOSTIC HYSTEROSCOPY

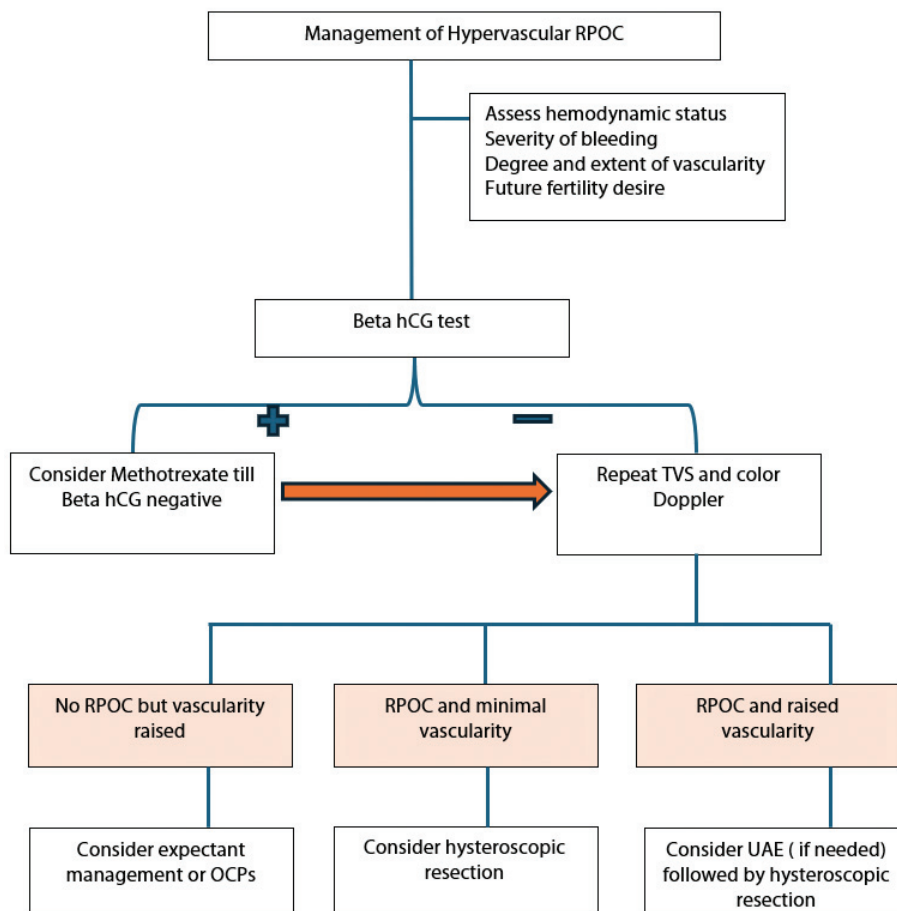
There is no role for hysteroscopy in confirming the findings of EMV in the presence of USG imaging features. Hysteroscopy may be used as a useful diagnostic and therapeutic tool in cases where there is a high index of suspicion for retained products of conception.⁵ As it carries an increased risk of bleeding, it should be performed under careful video visualisation to avoid injury.

MANAGEMENT OF EMV AND HYPERVASCULAR RPOC

The management of enhanced myometrial vascularity (EMV) is guided by the patient's clinical status, severity of bleeding, Doppler findings, and future fertility desires. A proposed management algorithm is described below:



Algorithm 1- Management of EMV (OCP- oral contraceptive pills; UAE- uterine artery embolization; PSV- Peak systolic velocity)



Algorithm 2- Management of Hypervascular RPOC

CONCLUSION

- A high index of suspicion is required during routine initial ultrasound evaluation in patients presenting with abnormal uterine bleeding, particularly in the context of any unsuccessful pregnancy event or treatment procedure (including uterine D&C, caesarean delivery, caesarean scar pregnancy, and gestational trophoblastic disease).
- Uterine EMV represents an important cause of delayed and severe vaginal bleeding following uterine trauma. Advances in TVS and Doppler parameters have improved recognition of these lesions.
- Differentiation from retained products of conception is critical because inappropriate curettage may result in catastrophic haemorrhage, thus increasing morbidity and affecting future reproductive outcome.
- After the differentiation of EMV from other causes (especially hypervascular RPOC), an initial risk stratification of patients should be done considering their clinical status and ultrasound findings, including PSV measurement, to triage them for either expectant, medical, or surgical management.
- Hypervascular RPOC, if persistent and large, may need surgical evacuation under hysteroscopic guidance

after carefully assessing and tackling the vascularity

- Continued research is required to refine classification systems and optimize individualized treatment strategies for these pathologies to preserve future reproductive potential.

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VaginosCUPy: Using a Modified Menstrual Cup for Hands-Free Vaginoscopic Hysteroscopy. A Feasibility Trial.

Fernandez R, Brito M, Bruzual A, Rodriguez S, Fernandez R, Piekos P, Carugno J. *J Minim Invasive Gynecol.* 2026;33(5):583-589.

BACKGROUND

- Vaginoscopic technique of hysteroscopy is widely adopted as it avoids the use of the vaginal speculum and tenaculum, shortens procedure time, and reduces patient discomfort.
- However, maintaining adequate vaginal distention remains challenging.
- In study, the feasibility, safety, and clinical utility of modified menstrual cup to maintain distension during hysteroscopy was assessed.

METHODOLOGY

- **Study Design:** Prospective, single-arm feasibility study
- **Study Duration:** February to November 30th, 2024 at 2 sites in Venezuela
- **Participants:** Pre- and post-menopausal women scheduled for diagnostic or operative vaginoscopic hysteroscopy
- **Exclusion criterion:** Pregnancy and active genital tract infection
- **Intervention:** A commercial, medical-grade silicone menstrual cup (medium-sized) was modified by removing distal stem and creating a circular central aperture (5mm in diameter) at dome using sterile surgical scissors (Figure 1).
- **Hysteroscope:** 5- mm Bettocchi hysteroscope
- **Distention Media:** Normal saline at standard pump pressures (60 to 80 mm Hg)
- **Cup Positioning:** In lower third of vagina, where bell-shaped rim created a circumferential seal to prevent fluid leakage and sustain distention while permitting instrument passage.
- **Analgesia:** No standardized analgesia or anxiolysis protocol. Awake procedures were performed, and sedation was used only when clinically indicated for the planned hysteroscopic intervention.
- **Primary Outcomes:** Successful insertion and use of modified cup (completion of hysteroscopy without manual labial occlusion), and adequacy of distention (complete visualization of vaginal walls, fornices, exocervix, and external os)
- **Secondary Outcomes:** Patient pain on 10-point visual analog scale (VAS), surgeon-reported ease of insertion, ability to complete the intended procedure, and operative complications (trauma, infection, fluid leakage)

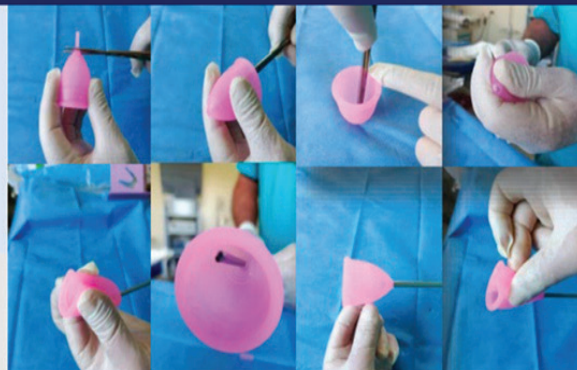


Figure 1 Modified Menstrual Cup

RESULTS

- Successful cup insertion and adequate vaginal distention occurred in 59/63 (93.7%) cases.
- Of successful cases, optimal distention and full visualization were achieved in 59/59 (100%).
- Only 4 postmenopausal women with severe vaginal atrophy could not tolerate CUP insertion.
- Cervical stenosis was encountered in 20/63 (31.7%) of cases; all were overcome and treated using micro-scissors, electrodes, or graspers without complications.
- Five adolescents with obstructive Mullerian anomalies underwent resection of transverse or oblique vaginal septa with satisfactory results.
- Patient discomfort was low: 49/63 (77.8%) reported mild pain (VAS 2/10), 10/63 (15.9%) moderate VAS (3/10) and 4/63 (6.3%) severe.
- Surgeons rated insertion "easy" in 51/63 (81.0%)
- No adverse events occurred.

CONCLUSION

Using a modified menstrual cup enables safe and reliable vaginal distention during vaginoscopic hysteroscopy, allowing for hands-free approach that improves ergonomics and facilitates hysteroscopic procedure. Further evaluation is warranted in postmenopausal and virginal patients.

Effect of collagen scaffold vs intrauterine device on preventing recurrence of intrauterine adhesions: Multicenter RCT.

Wang H, Gu X, Li T, Niu X, Zhang H, Yang Q, et al. *Fertil Steril*. 2026;125(4):708-716.

BACKGROUND

- Routine methods to prevent intrauterine adhesion (IUA) recurrence include placing a physical barrier like intrauterine device (IUD) or balloon catheter into uterine cavity post-adhesiolysis, administration of hormone therapy, and performing a second-look hysteroscopy (SLH) with removal of the intra-uterine barrier stents after 1 or 2 months.
- Collagen scaffold may serve as a carrier to bring mesenchymal stromal cells or autologous bone marrow mononuclear cells to uterine cavity, which can promote endometrial functional recovery, reduce IUA reformation

OBJECTIVE

To evaluate the efficacy of collagen scaffold vs. IUD in the prevention of adhesion recurrence in moderate IUA after hysteroscopic adhesiolysis.

METHODOLOGY

- **Study Design:** Multicenter, prospective, open-label, randomized parallel controlled superiority trial
- **Study Duration:** February 2023 to September, 2024 at 6 sites in China
- **Participants:** Moderate IUA with American Fertility Society (AFS) score of 5–8 in 20–40 years of age women with fertility desires
- **Exclusion criterion:** Active genital tract infection, intramural and submucosal fibroids, adenomyosis, history of malignancy, contra-indication to hysteroscopy
- **Sample Size:** 200 participants, with 100 allocated to each group (1:1)
- **Group I (Collagen scaffold):** 4x6 cm collagen scaffold immersed in 20 mL sterile saline and injected through 14 F Foleys catheter and its bulb inflated with 3 mL saline. Foley's was discontinued after 1 hour and scaffold remained inside
- **Group II (IUD):** O-shaped stainless-steel IUD with exact matching size of the uterine cavity (diameter 0–22 mm) was selected and inserted into uterine cavity.
- **Hysteroscopic Adhesiolysis:** Nonenergetic microscissor under transabdominal ultrasound monitoring
- **Distention Media:** Glucose solution (5%)
- **Analgesia:** Intravenous anesthesia
- **Post-operative:** Estradiol valerate (4 mg daily) on day 3 of menstrual cycle for 30 days, followed dydrogesterone (20 mg daily) for the last 10 days for 2 cycles
- **SLH:** day 10–15 of second menstrual cycle to evaluate the adhesion recurrence.

RESULTS

- Total participants: 195; Group I = 98 and Group II = 97
- Statistically significant improvement in reducing IUA recurrence in Group I with absolute risk difference of 19.5% (relative risk 1.4)
- No collagen scaffolds observed during SLH
- Extent of Uterine Cavity Involved score at SLH in Group I was significantly lower than Group II (P<.001)
- No significant difference in increase of PBAC score at 1-month post-operation between the two groups but at 2-months significantly higher in Group II vs Group I.
- Adverse events including abdominal pain, nausea, vomiting, vaginitis, vaginal bleeding, etc occurred in 75/195. No significant difference between the groups.
- No serious adverse events were reported.
- No significant difference in vital signs between two groups before and after the surgery (P>.05)

Outcome	Group I	Group II	P value
Rate of no IUA recurrence at SLH	77 (78.6 %)	57 (58.8 %)	0.003
AFS score at SLH, median (IQR)	2.0 (0.0–2.0)	2.0 (0.0–3.0)	0.948
Decrease of AFS score at SLH	5.0 (4.0–6.0)	5.0 (4.0–6.0)	0.449
Increase of PBAC score at 2-month postoperative	5.5 (-2.5–11.0)	3.0 (-2.5–11.0)	0.001

CONCLUSION

This trial has demonstrated that a collagen scaffold may be safely and effectively used to prevent IUA recurrence after hysteroscopic adhesiolysis in moderate IUAs.

Imaging of the Month

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CASE DETAILS

A 33-year-old primigravida, married for 6 months, presented with 2.5 months amenorrhea and pain abdomen with spotting per vaginum for last 3 days. Examination revealed normal findings except mild tenderness with fullness in right adnexa and cervical motion tenderness. Two-dimensional transvaginal sonography (2D TVS) revealed a thickened endometrium with an eccentrically located gestational sac (GS) with live fetus of 10 weeks near the uterine fundus (Figure 1A). To confirm the exact location, three-dimensional transvaginal sonography (3D TVS) was performed which showed GS surrounded by thin myometrium superiorly and inferiorly but not laterally confirming the diagnosis of interstitial ectopic pregnancy (Figure 1B). After thorough counselling and explaining high risk of rupture and catastrophic haemorrhage, surgical management was planned. All emergency blood investigations were within normal limits and serum β -hCG was >15,000 IU/L.

Laparoscopy revealed an obvious bulge at the right cornua involving the interstitial segment of the tube (Figure 1C). Diluted vasopressin (1 in 10 dilution) was injected into myometrium at the junction of ectopic mass and normal myometrium avoiding any intravascular injection. Right interstitial ectopic mass was excised along with right salpingectomy using bipolar energy and Harmonic Ace. Uterine defect was repaired in two layers using barbed suture (1-0 V-locc) suture and hemostasis was ensured (Figure 1D). Specimens were removed in an endobag. Post-operative period was uneventful and patient was discharged after 24 hours.

(B) 3D-TVS rendered image confirming the GS separate from the endometrial cavity, in the right cornua surrounded by thin myometrium except at the lateral side. (C) Laparoscopy image showing a tense, vascular bulge in the right cornua extending lateral to the round ligament.

(D) Laparoscopic view following excision of the interstitial pregnancy showing two layer repair of the cornual defect using barbed suture.

LEARNING POINTS

- Interstitial pregnancy, though rare (2–4% of ectopics), carries a disproportionately high risk of fatal haemorrhage due to the dual cornual blood supply and delayed presentation leading to rupture & maternal collapse with compromised future reproductive outcome.¹
- The diagnostic triad includes: (1) empty uterine cavity, (2) eccentrically located gestational sac, and (3) myometrial mantle < 5 mm.²
- 3D-TVS provides valuable coronal-plane assessment and improves diagnostic confidence when the location of the gestational sac is uncertain.¹
- Demonstration of a gestational sac separate from the endometrial cavity on 3D imaging aids differentiation of interstitial pregnancy from angular and eccentric intrauterine pregnancies.¹

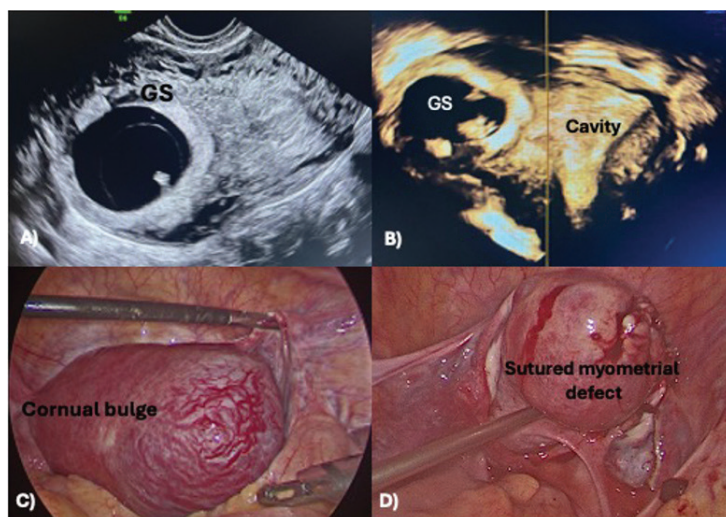


Figure 1 (A) 2D-TVS demonstrating an eccentrically located GS in the uterine fundal region.

Brain Boost Zone

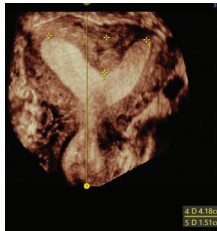
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1. A 48-year-old woman has a 9-cm multilocular-solid adnexal mass. MRI demonstrates an enhancing papillary projection with marked diffusion restriction (ADC $0.8 \times 10^{-3} \text{ mm}^2/\text{s}$). The cystic component contains no fat or blood products. Which imaging feature most strongly raises concern for malignancy?

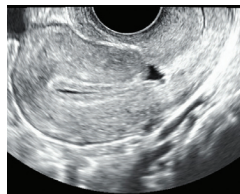
- A. Multilocularity
- B. Lesion size >8 cm
- C. Restricted diffusion within enhancing solid tissue
- D. Absence of acoustic shadowing

2. A 29-year-old woman with primary infertility undergoes one stop scan and 3-DTVS of uterus is done. Intercomunal distance is 4.18cm and distance between intercomunal line and myometrial depth is 1.51cm. Which of the following is the most appropriate interpretation?



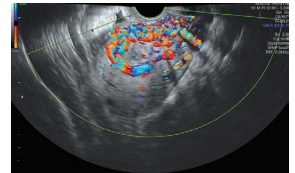
- A. Normal uterine variant because the external fundal contour is preserved
- B. Septate uterus because the endometrial indentation exceeds 1 cm
- C. Bicornuate uterus because the cavity is divided into two horns
- D. Arcuate uterus

3. A 32-year-old woman with previous one caesarean section and secondary infertility undergoes TVS which demonstrates a caesarean scar defect/isthmocele along with fluid in endometrial cavity on day 14 of menses. Which of the following TVS parameter is used to decide the route of isthmocele repair for symptomatic women?



- A. Width of the isthmocele
- B. Number of previous caesarean deliveries
- C. Residual myometrial thickness (RMT)
- D. Depth of the isthmocele

4. A 33 years nulliparous woman presents with persistent bleeding following medical management of a missed abortion 3 months back. TVS and colour doppler demonstrate multiple serpentine vascular voids with arteriovenous malformations. Which USG parameter is used to predict the benefit of uterine artery embolization for symptomatic relief and preserving future fertility potential?



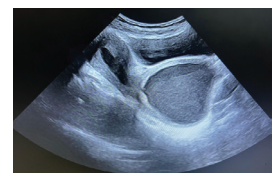
- A. Endometrial thickness
- B. Serum β -hCG level
- C. Peak systolic velocity (PSV) on Doppler
- D. Uterine volume

5. A 28-year-old woman with chronic pelvic pain and primary infertility undergoes TVS. A dilated, tortuous, fluid-filled tubular adnexal structure is seen, with incomplete septations projecting into the lumen that create a cross-sectional pattern resembling the spokes of a wheel. The ipsilateral ovary is identified separately from this structure. Which sign is being described, and what does it indicate?



- A. Whirlpool sign — ovarian torsion
- B. Cogwheel sign — dilated fallopian tube (hydrosalpinx)
- C. Stained-glass sign — endometrioma
- D. Honeycomb sign — polycystic ovary

6. A 14 years girl presents with primary amenorrhea and cyclical abdominal pain for last 8 months. Abdominal examination reveals 14 weeks size abdomino-pelvic mass and local examination reveals blind 2 cm vagina. and USG shows the following findings. What is the most probable diagnosis of this patient and which procedure is done for this anomaly?



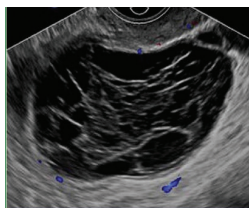
- A. Transverse vaginal septum- Jeffcoat's pull through vaginoplasty
- B. Cervical agenesis- cervicoplasty
- C. Transverse vaginal septum- Davydov's vaginoplasty
- D. Imperforate hymen- cruciate incision

7. A 32 years nulliparous woman presents with primary infertility for 6 years and heavy menstrual bleeding for 1 year with PBAC score of 350. TVS reveals a type 2 myoma of size 5x6cm. Which of the following statements is not true regarding her management?



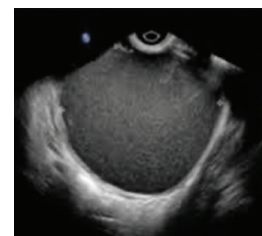
- A. Hb optimisation before surgery
- B. A trial of GnRh antagonist with add back therapy for 6-12 months
- C. Laparoscopic route for myomectomy
- D. Avoid uterine artery embolization

8. A 19-year-old unmarried lady presents with complaints of mild lower abdominal pain for last few days. Transvaginal ultrasound shows a right ovarian lesion which is shown below. What is the likely diagnosis?



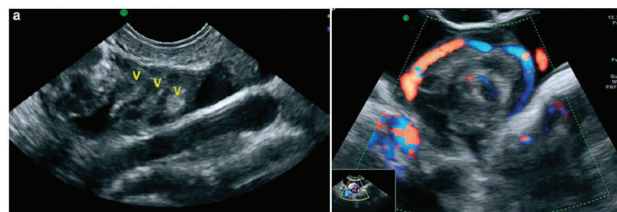
- A. Endometrioma
- B. Corpus luteal cyst
- C. Mature cystic teratoma
- D. Haemorrhagic cyst

9. A 28-year-old woman with chronic pelvic pain undergoes transvaginal ultrasound, which shows an ovarian cyst shown below. What is the most likely diagnosis?



- A. Endometrioma
- B. Corpus luteal cyst
- C. Mature cystic teratoma
- D. Haemorrhagic cyst

10. A 24-year-old woman presents to the emergency department with sudden-onset severe right iliac fossa pain, nausea, and vomiting for the past 4 hours. TVS shows an enlarged right ovary (volume 28 cm³) with peripherally displaced follicles and swirling flow on colour doppler as shown below. What is its significance?



- A. Twisted vascular pedicle; a highly specific sign of ovarian torsion, but its absence does not exclude the diagnosis.
- B. Free fluid swirling in POD; indicates haemoperitoneum requiring urgent laparotomy.
- C. Twisted fallopian tube alone without vascular compromise
- D. Normal physiological torsion-detorsion of the ovary during the menstrual cycle; no clinical significance

1. C, 2. B, 3. C, 4. C, 5. B, 6. A, 7. B, 8. D, 9. A, 10. A

Answers:

The Psychological Health of Infertile Couple: The Neglected Segment of Fertility Treatment

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Diagnosis of infertility is often traumatic for many patients. It can be viewed as a life crisis that significantly impacts one's plans, goals, and quality of life. Couples might initially react with shock, surprise, denial, or disbelief, however, these emotions gradually give way to grief that manifests as anger, guilt, sadness, and fear. These are further complicated by sociocultural surroundings wherein procreation forms backbone of marital relationships and families. Studies suggest that stress experienced by individuals undergoing infertility treatment is comparable to those with life-threatening diseases like cancer, hypertension, and cardiovascular disorders. A reciprocal relationship between stress and infertility including IVF outcomes exists due to the interplay of the hypothalamic-pituitary-adrenal (HPA) axis and the endocrine system. Despite the evidence supporting the link, it is often overlooked or misunderstood.

WHAT MAKES INFERTILITY STRESSFUL?

Transactional Model of Stress and Coping suggests that reaction to a stressor, such as infertility, is informed by one's *primary appraisal* of it as harmful or threatening as the demands exceed the available resources. These demands are a result of personal goals, needs, values, and beliefs as well as of those around them. *Secondary appraisal* dictates behavioral and emotional efforts made as part of coping to these demands. Two types of coping strategies can be employed: problem-focused or emotion-focused. While former involves dealing with the stressor directly by analyzing or taking actions, the latter aims at minimizing distress by using strategies like avoidance, seeking social support, using humour, etc. Over time, individuals enter the third phase, "*reappraisal*," wherein factors such as relevance of stressor in their life and resource availability are assessed. Helping patients reappraise infertility and treatment outcomes, and develop more adaptive coping strategies can mitigate distress.

HOW INFERTILITY IMPACTS INDIVIDUALS

Studies indicate that psychiatric symptoms may be present in almost 12-56% of patients with infertility. Couples show an increase in anxiety, depression, and paranoid ideation during treatment; women additionally show elevated obsessive-compulsive symptoms while men show greater hostility and interpersonal sensitivity. Gender roles assigned to women make them more susceptible to the impact of infertility. As treatments are often directed at and place responsibility to successfully conceive on

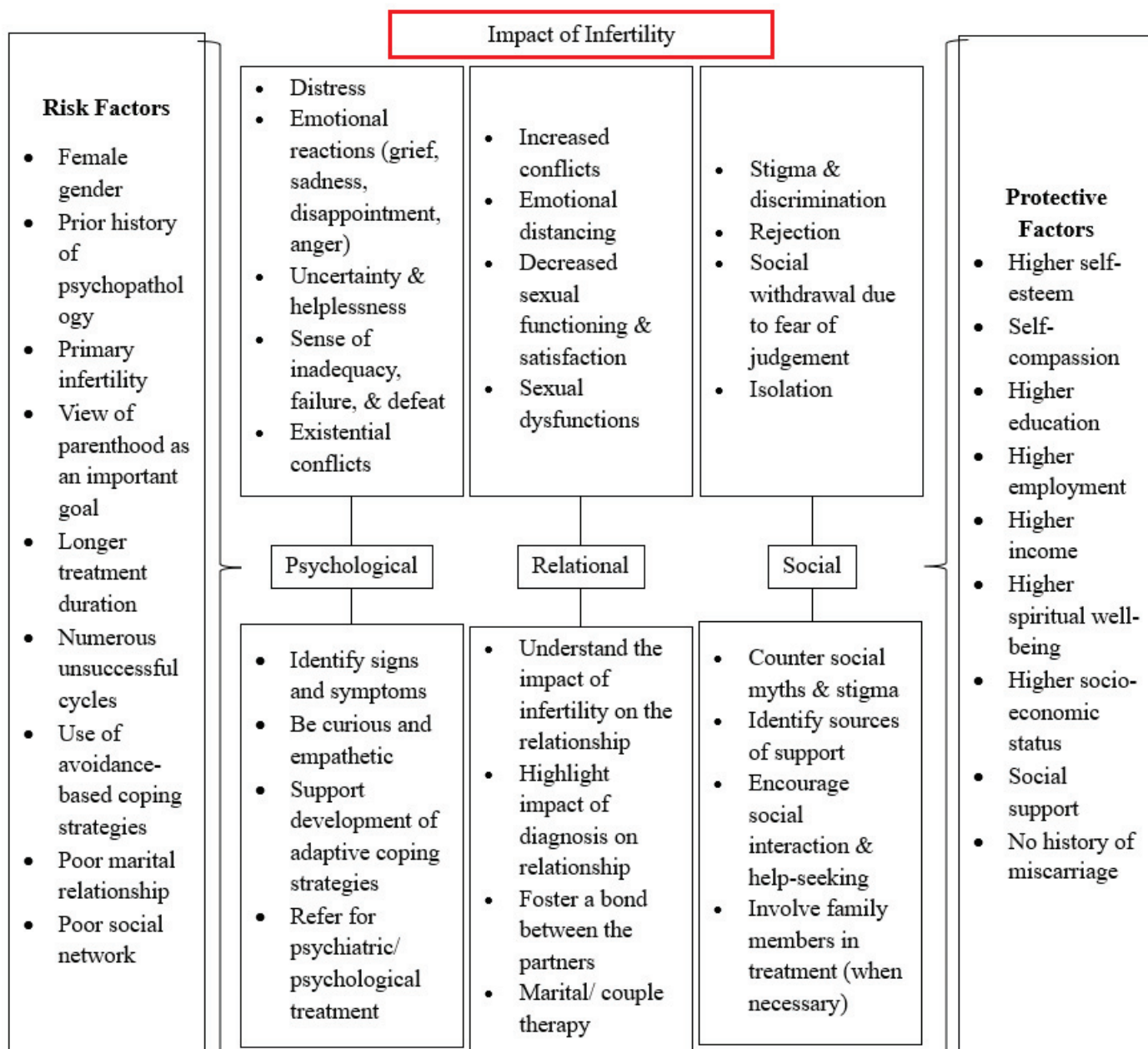
the woman's body, they face the effects of "medicalized embodiment of infertility" even in case of couple (both), unexplained, or male infertility.

Motherhood forms an integral part of a woman's identity, and communities often view children as a prerequisite for a stable relationship. Within this context, childless women may be seen as inadequate and childless couples as dysfunctional. Such stigma results in social isolation and rejection. Evidence also suggests that women in joint families report adverse mental health outcomes as they are subjected to higher stigmatization. Experience of disenfranchised grief – as the loss of their fertile self, hope of natural conception, or of imagined future child is not socially recognised or seen as significant – further reduces the social support available.

MEDIATING FACTORS AND TARGETS OF CHANGE

Researchers have identified various factors that mediate the impact of infertility on an individual. One such factor is self-esteem which is positively associated with decreased effect of infertility-related stress on anxiety and depression. Self-compassion has also been identified as a protective factor against negative outcomes of infertility. It involves treating oneself with kindness during times of suffering, failure, or painful experiences by being mindful of the pain, offering non-judgmental understanding to it, generating a desire to decrease suffering, and accepting it as part of human experience instead of avoiding it or feeling isolated from it.

Practitioners can identify at-risk individuals and help them reappraise infertility as being less threatening to their sense of self. This process can be aided by the development of more adaptive coping strategies that in turn increase confidence and allow reintegration of identity. Moving beyond one's identity as infertile warrants an increased focus on developing the professional, social, and personal self by focusing on controllable aspects and engaging in work, social interactions, and pleasurable activities. Self-statements (such as, "this is a moment of suffering," "pain is temporary"), self-inquiry (such as, attempts to label emotions, asking "what do I need right now?") can be other helpful techniques. Additionally, fostering a supportive bond between the partners can assist in improving the quality of life of the infertile couple.



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HER Story... HER Words...

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Clinical literature rarely captures patient experiences. In **'HER Story, HER Words'** we set aside the statistics and clinical wards; and describe one woman's lived experience of cancer, delays in diagnosis, her fears, her wait, the story how a baseline TVS changed her path to have a pregnancy and her fight through cancer to the fertility.

1. When did your health concern first begin, and how long did it take to get a diagnosis?

My journey began almost a decade ago. I noticed irregular symptoms alongside ongoing fertility struggles, but despite consulting multiple specialists across Canada and the United States, I never received the correct diagnosis. Over the years, I was given varying explanations for my fertility challenges- age, unexplained factors, possibly PCOS. I underwent countless tests and was often told that everything looked normal. I always had invariably high AMH levels but no doctor could explain why. Numerous markers were tested but in hindsight probably not the right ones. The years passed without any real answers and emotional toll became overwhelming. The uncertainty was often harder than the physical symptoms and I felt stuck in a cycle of appointments, treatments, and disappointments.

2. As a healthcare professional yourself, how did that shape your experience as a patient?

I am a dental surgeon, trained in India and the United States, and later settled in Canada. I genuinely believed that my medical background would make it easier to navigate the system. Despite my knowledge, my persistence, and my ability to articulate my symptoms clearly, I still found myself feeling unheard and inadequately investigated. It was a humbling experience that reminded me that even healthcare professionals can find themselves lost in the system when they become patients.

3. What finally led you to seek a different opinion, and where did that take you?

After years of uncertainty, I decided to seek another opinion in India. As suggested by a close family friend, I met doctors in the Department of Obstetrics and Gynaecology at All India Institute of Medical Sciences, New Delhi. That referral turned out to be one of the most important decisions of my life. At AIIMS Delhi, I was received by a team who reviewed my entire history carefully and investigated my case

with a thoroughness I had not experienced before. The team showed exceptional care, professionalism and compassion. For the first time, I felt truly heard. Their expertise gave me confidence during one of the most challenging periods of my life. They not only treated my medical condition but also understood how deeply my fertility journey mattered to me.

4. What was your diagnosis, and how did you receive the news?

During the initial evaluation, I was subjected to TVS and I was told that there was a small tumour in the ovary which might be the cause and answer to all my years long symptoms, delayed menses and difficulties in conception. This USG was the turning point and I was quickly advised the relevant tumour markers and I was finally diagnosed with a granulosa cell tumour- a diagnosis that had been missed for years despite countless consultations in two different countries. Receiving that diagnosis was both shocking and, strangely, relieving also. As difficult as it was to learn that I had been living with this condition for so long, I finally had an explanation. That clarity, after a decade of uncertainty, meant more than I can express. Their expertise gave me confidence during one of the most challenging periods of my life. Whenever fear, anxiety or doubt crept in, they encouraged me to keep going. They took time to answer my questions, address my concerns and help me overcome the many fears that naturally come with a long and complicated fertility journey. Their kindness, patience and confidence gave me strength during some of my most difficult moments.

5. After treatment, what happened on the fertility front?

Following treatment (laparoscopic removal of tumour along with staging), I had to go back to Canada and surprisingly, I got spontaneous menses after years without need of any tablets. I conceived naturally within three months although it was an abortion. After 4 months, I came back to India and has undergone IVF cycles at AIIMS New Delhi. The road till this point was not easy, but the support I received made all the difference. The outcome was something I had almost stopped believing was possible- nine embryos. When I saw those numbers, I wept. It represented over a decade of perseverance, hope, and the stubborn refusal to give up on my dream of becoming a mother.

6. What would you like others to take from your story?

Finally with nine good quality blastocysts, I am waiting for frozen embryo transfer cycle and I am looking forwards with a genuine hope. After more than a decade of searching diagnosis, setbacks, and unanswered questions, I am finally looking toward the future with optimism. I know there are no guarantees. But I know I have fought with everything I had. And for the first time in a long time, I truly believe my miracle

may be within reach. I am incredibly grateful for how far I have come and for the care I received at AIIMS Delhi.

If there is one thing I want other women to hear, especially those who feel dismissed, or lost, or exhausted by the search for answers, it is keep going. Seek another opinion. Trust your instincts about your own body. The right team, and the right diagnosis, can change everything.

AOGD Clinical Meeting from Indraprastha Apollo Hospital held on 19.06.2026

PLUGGING THE CULPRIT VESSEL: RARE CASE OF ANTENATAL EMBOLIZATION OF A CHORIOANGIOMA IN A DCDA TWIN PREGNANCY

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¹Fellow Fetal Medicine, ²Senior Consultant, ³Senior Consultant
Indraprastha Apollo Hospital, New Delhi

Background

Placental chorioangiomas are associated with significant maternal and fetal complications secondary to their arteriovenous shunt mechanism. Various prenatal therapies have been described (laser coagulation, embolization, RFA, alcohol ablation), but experience remains limited, particularly in twin pregnancies. Here, We discussed a unique case of giant chorioangioma in a DCDA twin pregnancy successfully managed by antenatal embolization of the feeding vessel using enbucrilate.

Case summary

32 year old multigravida with DCDA twin pregnancy, presented to us at 24+5 weeks with chorioangioma (8x7cm) in Twin 2 causing polyhydramnios and fetal anemia. Multistep approach was planned. Firstly, 4 litre of amniotic fluid was drained to relieve severe maternal discomfort due to polyhydramnios. After that, definitive management was done using enbucrilate and lipiodol emulsion to embolise the feeding vessel to the chorioangioma. One cycle of IUT was also given to the twin 2 to treat the anemia (MCA PSV – 1.7 MOM). On follow up scan after 4 weeks of embolization, MCA PSV of twin 2 was again more than 1.6 MOM, Hence fetal blood sampling was done, which ruled out fetal anemia (Hb – 12.6 g%), Fetal ECHO raised suspicion of antenatal pulmonary artery hypertension and/or premature ductal closure. The patient deferred any further prenatal therapy (anecdotal reports of intrauterine prostaglandins). The pregnancy resulted into emergency caesarean at 30 weeks in view of PPRM with foot prolapse and she delivered two female fetuses with hydropic fetus requiring ventilator support.

Discussion

Previously reported cases on enbucrilate use for embolisation of the feeding vessel demonstrated favourable outcomes with majority resulting in livebirths. However, portal vein thrombosis was reported in one of the cases. Enbucrilate is a promising sclerosant especially while planning a technically simpler and minimally invasive

approach in cases where a dominant feeding vessel is visible with no risk of thermal damage (unlike RFA).

Conclusion

Early recognition of fetal compromise and timely fetal intervention may improve perinatal outcomes in pregnancies complicated by giant chorioangioma. Antenatal embolisation with enbucrilate represents a promising therapeutic option in carefully selected cases and may allow continuation of pregnancy with favourable neonatal outcomes.

ACUTE PANCREATITIS IN PREGNANCY: A RARE CAUSE OF ACUTE ABDOMEN IN OBSTETRICS

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¹DNB resident, ²DNB resident, Senior Consultant OBGY, Infertility and ART Specialist

Background

Acute pancreatitis in pregnancy (APIP) is a rare but potentially life-threatening condition, occurring in approximately 3 per 10,000 pregnancies (O'Heney J L et al 2021). The incidence of acute pancreatitis in pregnancy increases with advancing gestation, with reported rates of 3.4, 23.2, and 63.2 cases per 100,000 women per year during the first, second, and third trimesters, respectively (Haiyan Z et al., 2022; Maringhini A et al., 2024). Despite significant reductions in maternal and fetal mortality with modern critical care, APIP remains associated with substantial maternal and neonatal morbidity. Prompt diagnosis and multidisciplinary management are essential to optimize outcomes.

Case Presentation

A 32-year-old primigravida with morbid obesity (BMI 41.5 kg/m²), gestational diabetes mellitus, chronic hypertension, and autoimmune thyroiditis was referred at 30 weeks of gestation for high-risk antenatal care and delivery in Indraprastha Apollo Hospital. At 36 weeks, she presented to Emergency department with severe epigastric pain radiating to the back associated with vomiting. Obstetric evaluation was unremarkable.

Laboratory investigations revealed markedly elevated serum amylase (1230 U/L) and lipase (16,870 U/L), fulfilling Atlanta diagnostic criteria for acute pancreatitis. Ultrasonography demonstrated a bulky pancreatic body, hepatomegaly, and grade II fatty liver without gallstones or biliary sludge. Metabolic risk factors were present. A

diagnosis of Idiopathic acute pancreatitis was established after exclusion of obstetric and hepatic causes.

Management

The patient was managed conservatively through a multidisciplinary team comprising obstetrics, gastroenterology, endocrinology, and internal medicine specialists. Treatment included aggressive intravenous fluid resuscitation, bowel rest, analgesia, electrolyte correction, glycemic optimization, antihypertensive therapy, and vigilant fetal surveillance. Serial biochemical monitoring demonstrated significant improvement in pancreatic enzyme levels. During follow-up, intrahepatic cholestasis of pregnancy was diagnosed based on elevated serum bile acids (32.9 $\mu\text{mol/L}$) and managed with Tab. Ursodeoxycholic acid and Tab. Heptral. Considering multiple maternal comorbidities, previous acute pancreatitis, polyhydramnios, unfavorable cervix, high floating head, and nuchal cord, shared decision was taken for elective lower segment cesarean section at 38 week.

Outcome

A healthy male neonate weighing 4.1 kg was delivered with Apgar scores of 8 and 9 at 1 and 5 minutes, respectively. The postoperative period was uneventful, and both mother and baby were discharged in stable condition on postoperative day four.

Discussion

This case highlights the importance of early recognition and multidisciplinary management of acute pancreatitis in pregnancy. Morbid obesity and gestational diabetes likely contributed to the development of pancreatitis in late gestation. The predominant causes of acute pancreatitis in pregnancy are biliary sludge and gallstone disease, which account for nearly two-thirds (65%) of cases (O'Heney J L et al. 2021, Maringhini A et al. 2024). Less frequent etiologies include hypertriglyceridemia (4–9%) and alcohol use (5–10%), whereas approximately 12% of cases are classified as idiopathic (O'Heney J L et al. 2021, Maringhini A et al. 2024).

Reported fetal complications include preterm delivery (18–60%), neonatal respiratory distress (18.5%), fetal loss (0–23%), and neonatal mortality of up to 75.5 per 1,000 live births (Alanzi AK et al., 2023; Zhang T et al. 2022; Mądro A et al. 2022). Although severe pancreatitis remains associated with significant maternal and fetal morbidity. Historically acute pancreatitis in pregnancy carried a maternal mortality of 20–37% and fetal mortality of 50–60% (Ducarme G et al 2014). With modern multidisciplinary management, maternal mortality has decreased to approximately 2.8–3.3% and fetal mortality to 11–18% (O'Heney J L et al. 2021, Maringhini A et al. 2024), underscoring the importance of early recognition and multidisciplinary management to optimize fetomaternal outcomes.

Take-Home Message:

This case demonstrates how early recognition of acute pancreatitis in a morbidly obese primigravida with gestational diabetes and intrahepatic cholestasis, followed by multidisciplinary management, resulted in complete maternal recovery and delivery of a healthy term neonate despite multiple high-risk factors.

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WHEN LIGHTNING STRIKES TWICE RECURRENT UNPROVOKED UTERINE RUPTURE IN CONSECUTIVE PREGNANCIES

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Background

Unprovoked recurrent uterine rupture in the upper segment is a rare, life-threatening obstetric complication with sparse evidence-based consensus guidelines. While most uterine ruptures occur at the site of a prior lower segment Caesarean scar during a trial of labour, ruptures involving scarred fundal or upper uterine segment carry a profoundly elevated recurrence risk. The incidence of recurrent uterine rupture though is reported as high as 10%, which is very low 0.003%–0.012% in unscarred uterus. This report highlights the clinical challenge of managing a consecutive, unprovoked fundal rupture at 31 weeks of gestation, emphasizing that immediate clinical judgment must supersede reassuring diagnostic investigations.

Case Presentation

Patient Profile: A 38-year-old female

(G3P2L2) from Arunachal Pradesh presented with an unplanned pregnancy at 10 weeks of gestation,

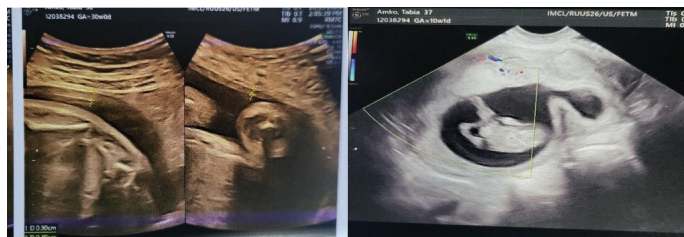
complicated by a history of emergency laparotomy for a fundal uterine rupture in her second pregnancy at 33 weeks prior to labour pains (5 years back) and a primary LSCS for cephalopelvic disproportion (10 years back), seeking termination due to high risks, which was refused locally. She brought a pelvic MRI report, done in Arunachal Pradesh indicating transient fundal contractions with alternating thickness and approached our tertiary care facility for definitive high-risk management.

Ultrasound obstetrics done in our foetal medicine department at 10 weeks of gestation suggested intact myometrium but noted thick intrauterine synechiae partially segmenting uterine cavity with foetus in the larger segment.

After thorough counselling about the present scenario, patient decided to continue pregnancy under close antenatal follow up at our tertiary care centre.

Antenatal Management:

- All the necessary antenatal investigations were done, and patient was diagnosed with gestational diabetes mellitus, managed on medical nutrition therapy.
- Serial evaluations by the foetal medicine department identified an isolated right congenital talipes equinovarus (club foot) and mild asymmetric right lateral ventricular prominence with normal amniocentesis (WES/TORCH PCR).
- MRI Brain confirmed the asymmetry of the right lateral ventricle, and myometrium was found intact in entirety.
- Scan at 27 weeks suggested mild polyhydramnios with intact lower uterine segment and myometrium throughout.
- Serial scan at 30 weeks revealed thinning at fundal region (2.0 - 2.6 mm) in comparison to rest of the myometrium, however no definitive complete dehiscence or extrauterine herniation of membranes was noted.



Acute admission and Emergency Trigger:

- She was advised a planned admission at 31 weeks for Elective lower segment caesarean section with bilateral tubal ligation under antenatal corticosteroid coverage and injection MgSO₄ for neuroprotection despite her reluctance for early admission in view of previous history of fundal uterine rupture at 33 weeks

and suspicious ultrasound findings.

- Patient had no complains apart from vague discomfort. FHS was monitored regularly with maternal sugar monitoring for steroid administration.
- Next day evening, she experienced some abdominal pain identical to her previous rupture. Physical examination revealed, stable vitals (PR: 92/min, BP: 110/70 mmHg), reactive CTG baseline (140 bpm) with minimal uterine activity, but profound localized fundal tenderness. Based entirely on clinical signs and patient complains, an immediate emergency laparotomy was performed for suspicion of imminent rupture uterus.

Intraoperative Findings: Emergency laparotomy revealed a 1.0 to 1.5-liter hemoperitoneum and a complete transmural uterine rupture across all layers of the fundus, extending across both the anterior and posterior walls. A live male infant (1.892 kg) was delivered via breech extraction from the right horn with major placental separation. An abnormal muscular bulge was noted on the left lateral uterine wall. The uterine rent was repaired in multiple layers, absolute haemostasis was achieved, and bilateral tubal ligation was executed.



Outcomes: The maternal postoperative course was stable following a 3-unit packed RBC transfusion for a haemoglobin drop to 8.8 g/dl. Patient was discharged after drain removal on postoperative day 5 in satisfactory condition. The infant required intubation (APGAR 1/10 to 7/10) and surfactant therapy for respiratory distress syndrome (RDS), but was successfully transitioned to room air. Neonatal sepsis due to *Acinetobacter baumannii* was managed with a 21-day course of targeted antibiotics, and full oral feeds were established. USG brain confirmed the antenatal findings, with rest of the scan reported as normal, and right side talipes was seen on examination.

Discussion

The pathophysiology of recurrence in upper-segment scars involves extensive thermal or surgical fibrosis, which limits the natural elasticity and vascularization of the myometrium as the uterus expands. Other causes include- myometrial structural weakness due to congenital uterine anomalies, abnormal placentation (placenta accrete syndrome), mechanical / obstetric overdistention and obstruction, uterine vessel rupture or any prior surgery involving endometrium or myometrium. Unlike lower segment dehiscence, fundal defects are highly

unstable and prone to catastrophic, spontaneous tracking before the onset of active labour. This case emphasizes a critical clinical paradox: despite normal intervals of intact myometrium on serial imaging and a reassuring, reactive CTG, extensive structural wall failure can occur silently. Therefore, reproducing historical symptoms—specifically localized, sharp fundal pain—remains the primary diagnostic indicator for imminent rupture.

Conclusion

Recurrent spontaneous uterine rupture remains an unpredictable catastrophe that demands an aggressive index of clinical suspicion. Reassuring radiological metrics or reactive foetal heart monitoring should never delay surgical exploration when clinical presentation strongly indicates an impending rupture. Successful maternal and neonatal preservation hinges entirely on early tertiary-level multi-disciplinary monitoring, immediate access to an advanced NICU and blood bank, and an uncompromised readiness to proceed with emergent surgical intervention.

Key Messages

1. Anatomical Risk Architecture: Uterine ruptures involving the upper segment, classical incisions, or the fundus carry a vastly higher recurrence risk than isolated lower-segment scars, classifying all subsequent gestations as ultra-high risk.
2. Clinical Signs Overrule Diagnostics: Serial ultrasounds and continuous CTG strips can be deceptive. Sudden, localized fundal tenderness must override reassuring

diagnostic test results and prompt an immediate laparotomy.

3. Proactive Delivery Window: To minimize the risk of a catastrophic event, an elective repeat Caesarean section should be planned at a tertiary care centre at least 2 to 3 weeks prior to the gestational age of the index rupture event.
4. Definitive Sterilization Counselling: Due to the extreme, life-threatening recurrence profile, patients surviving a primary upper-segment uterine rupture must be strongly counselled against future pregnancies and offered definitive bilateral tubal ligation.

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AOGD President & Vice President Election (2027-28)

Call for nominations

Nominations are invited from eligible AOGD members for the following posts

- President (2027-28)
- Vice President (2027-28)

Last date for submission of nominations is **31st July 2026**

- Applications by desirous candidates should be submitted on the prescribed form available on AOGD website (www.aogd.org) / bulletin / office, with due entry in the office register in a sealed envelope & through email aogdaiims2026@gmail.com.
- The nomination shall be proposed by one regular member and seconded by two regular AOGD members.
- The candidate, his/her proposer and seconder should have cleared all their dues towards the membership subscription in full. Noncompliance with this condition shall render the nomination invalid.
- Nominations as per the eligibility criteria should reach AOGD secretariat: Room no. 714, 7th Floor, Mother & Child Block, Department of Obst. & Gynae, AIIMS Hospital, New Delhi- 110001 (Phone no. 9717392924) by **31st July 2026**.

Accepted nomination(s) will be displayed at AOGD website by **15.08.2026**

NOTE:

- The new members joining AOGD after the date of call for nominations will not be eligible for voting.
- Associate members are not eligible to vote.

Dr. K Aparna Sharma (Secretary AOGD, 9711824415)

Eligibility Criteria for PRESIDENT AOGD

1. He/she shall be a senior and active member of faculty in a multidisciplinary hospital of Delhi in the public or the private sector, with such hospital having clinical and para-clinical departments and having post graduate courses, duly recognized by the National Medical Commission and/or the National Board of Examination.
2. He/she must have held the post of professor/ senior consultant/ an equivalent thereof with such hospital for more than 10 years.
3. He/she must have the experience of having completed at least one tenure as the chairperson of a sub-committee of the AOGD or the experience of having completed at least one tenure as Vice President or Secretary or member of the Executive Committee of the AOGD.
4. He/she must be a life member of the AOGD with more than twenty years of experience after post graduation in the specialty of obstetrics and Gynaecology.
5. He/she should have experience of conducting academic conferences, seminars or workshops.
6. A person who has held the post of President of the AOGD in the past shall be ineligible to hold the post of President of the AOGD again.
7. Faculty from the institution that fields the President shall be ineligible to apply for election to the post of President for a period of five years from the date of start of the tenure of that President.

Eligibility Criteria for VICE PRESIDENT AOGD

1. He/she shall be a senior member of faculty in a multidisciplinary hospital of Delhi in the public or the private sector, with such hospital having clinical and para-clinical departments and having post graduate courses, duly recognized by the National Medical Council / National Board of Examination.
2. He/she must have held the post of professor / senior consultant / or an equivalent thereof with such hospital for more than seven years.
3. He/she must have the experience of having completed at least one tenure as the chairperson of a sub-committee of the AOGD or the experience of having completed at least one tenure as Secretary or Treasurer or Editor or member of the Executive Committee of the AOGD having attended at least 75% of the meetings of the Executive Committee during his/her tenure as member of the Executive Committee
4. He/she must be a life member of the AOGD with more than fifteen years of experience after post graduation in the specialty of obstetrics and gynaecology.
5. He/she should preferably, have experience of conducting academic conferences, seminars or workshops.
6. A person who has held the post of Vice-President of the AOGD in the past shall be ineligible to hold the post of Vice-President of the AOGD again.

The Association of Obstetricians & Gynaecologists of Delhi

Nomination Form

Name: _____

Designation/Affiliation _____

AOGD Membership no: _____

Official Address: _____

Residential Address: _____

Phone: _____ Email: _____

Bio Sketch (Relevant to the Eligibility Criteria in 250 words)

Post Applied for

President
2027-28

☐

Vice President
2027-28

☐

Proposed by – Name

AOGD Membership no.

Signature

1.

Seconded by

1.

2.

Nominations should reach at AOGD Office
For any Query please call Mrs. Sarita : 9211656757, 9717392924



AOGD 2026

48th Annual Conference of AOGD



Organized by:
Department of Obstetrics and Gynaecology, AIIMS, New Delhi

12th & 13th September 2026 | Venue: India Habitat Centre, New Delhi

With HER (Heal, Empower, Respect) Every Step of the way!!!

REGISTRATION FORM

AOGD Member: Yes ☐ No ☐ AOGD Membership No: _____ DMC No: _____

Title: Prof. ☐ Dr. ☐ Mr. ☐ Ms. ☐ Mrs. ☐ Gender: Male ☐ Female ☐

First Name: _____ Middle Name: _____ Last Name: _____

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Country: _____ City: _____ State: _____ Pin: _____

Telephone: _____ Mobile No. With Country Code: _____

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(Please use block letter only)

(All the above fields are mandatory)

CONFERENCE REGISTRATION FEES

CATEGORY	Early Bird (Till 31st July 2026)			Regular (1st Aug to 31st Aug 2026)			Onwards/On-spot		
	Amount	GST 18%	Total	Amount	GST 18%	Total	Amount	GST 18%	Total
☐ AOGD Member	6000	1080	7080	6500	1170	7670	7000	1260	8260
☐ Non-Member	7000	1260	8260	7500	1350	8850	8000	1440	9440
☐ PG Students	5000	900	5900	5500	990	6490	6000	1080	7080
☐ AOGD Member (above 70yrs)	Complimentary (Kindly email duly filled Registration Form along with age proof on our official email id mentioned below)								

Pre-Conference Workshop - 10th-11th September 2026

Early Bird (Till 31st July 2026)			Regular (1st Aug to 31st Aug 2026)			Onwards / On spot		
Amount	GST 18%	Total	Amount	GST 18%	Total	Amount	GST 18%	Total
1500	270	1770	1800	324	2124	2000	360	2360

Opting For: 10th ☐ 11th ☐ Both Days ☐

Note: This registration form is intended exclusively for senior citizens who are not comfortable using computers or digital technology. All other delegates are kindly requested to register online through www.aogd2026.com.

Pre-Conference - 10th September 2026 (Tick your choice of workshop)

Sub-Committee	Session	Chairperson	Title	Venue
☐ Menopause & Geriatrics	Pre-lunch	Dr. Meenakshi Ahuja	Menopause and Ageing Skills Lab: Beyond the lecture	To be Updated
☐ Fetal Medicine and Genetics	Pre-lunch	Dr. Upma Saxena	Precision Prenatal Care in the Second Trimester: Early Risk Prediction Integrating Fetal Anatomy, Doppler and Genetics for Adverse Pregnancy Outcomes	VMMC old LT
☐ Safe Motherhood	Post-lunch	Dr Ratna Biswas	Safe Motherhood: Life-Saving Obstetric Interventions and Best Practices Across All Stages of Labour – A Video- Workshop	LHMC
☐ Infertility & Reproductive Endocrinology	Post-lunch	Dr Bindu Bajaj	IVF Decoded: From Basics to Breakthroughs	VMMC and Safdarjung Hospital
☐ QI Obst & Gynae Practice	Full Day	Dr Surveen Ghumman	Vision 2026: Building an ethos of Quality and Precision Care in OB/GYN	To be Updated

Pre-Conference - 11th September 2026 (Tick your choice of workshop)

Sub-Committee	Session	Chairperson	Title	Venue
☐ Urogynaecology	Pre-lunch	Dr Sonal Bhatla	Urogyn Video Surgical Workshop 2026 Real Cases, Real Challenges, Real Solutions	To be Updated
☐ Medico-legal	Pre-lunch	Dr Susheela Gupta	Bridging clinical excellence and legal safety: protecting patients, protecting practice Title for Medico-legal workshop	Fortis Hospital Shalimar Bagh Auditorium
☐ Adolescent Health / Community Health & Public Awareness	Pre-lunch	Dr Dipti Nabh Dr Divya Singhal	Adolescent gynaecology 360°: New Perspectives, New Paradigms	To be Updated
☐ Endoscopy / Endometriosis	Post-lunch	Dr Kanika Jain Dr Rita Bakshi	Surgical precision through camera vision: A hands-on video workshop	Sir Ganga Ram Hospital
☐ Oncology	Post-lunch	Dr Bindiya Gupta	INCISE Workshop: Shaping Skills in Gynae Oncology	UCMS and GTB hospital
☐ Research Methodology	Post-lunch	Dr. Neena Malhotra	Think, Design, Discover: A Hands-on Research Workshop	AIIMS

Note:

- Conference registration is mandatory for workshop registration.
- Delegates may select one workshop per session (Pre-lunch/Post-lunch) on each day of the two-day pre-conference workshop schedule.
- Workshop registration fees will be charged separately for each workshop selected.
- Post graduates to attach a certificate from HOD and also should be a member of the AOGD in order to attend and present a paper.
- Membership number is mandatory for registration in membership category. For any queries related to membership, you may contact **Ms. Sarita** (+91 92116 56757).
- For spot registrations, payment will be accepted via Cash, Card, or UPI only (cheques will not be accepted). Delegate kits will be provided subject to availability.
- Delegate kits will be handed over only to registered delegates.
- Registration is non transferable.
- No delegate kit, workshop material, or any other conference material will be distributed to Delegates, Associate Delegates, or PG Students after the conference.

Offline Payment Details

Account Name: AOGD 2026

Account No: 45142130513

Bank Name: State Bank of India

Branch: AIIMS, New Delhi

IFSC Code: SBIN0001536

MICR Code: 110002005

Mode of Payment: NEFT/RTGS ☐

TR/Reference Number/Transaction Id : _____

For Cheque/DD Payments

For Cheque/DD Payment: Please issue the cheque in favor of **AOGD 2026**

Submit to: **Ms. Sarita** (+91 9211656757)

Name of account : AOGD 2026

Account number: 45142130513

IFSC code : SBIN0001536

Branch : AIIMS, New Delhi

New Delhi – 110001

Payment Details

DD/Cheque No: _____ **Dated:** _____

Drawn on (Name of the Bank): _____ **Branch:** _____ **Amount:** _____

Cancellation & Refund Policy

1. All cancellation requests must be submitted in writing to the AOGD Secretariat.
2. Cancellation requests received on or before 15th July 2026 will be eligible for a 75% refund of the registration fee paid.
3. Cancellation requests received between 16th July 2026 and 14th August 2026 will be eligible for a 25% refund of the registration fee paid.
4. No refund will be provided for cancellations received on or after 15th August 2026.
5. The refund process will commence 30 days after the conclusion of the conference.

NOTE: The Organizing Committee of AOGD 2026 shall not be liable for any delay, modification, postponement, or cancellation of the conference due to circumstances beyond its reasonable control, including but not limited to natural disasters, acts of God, terrorism, labor disputes, war, civil unrest, or government restrictions.

AOGD Office

Secretariat Address

AOGD, Department of Obstetric and
Gynaecology, AIIMS, NEW DELHI

Email: aogdaiims2026@gmail.com

Mobile: +91 92116 56757



Conference Manager

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Mayur Vihar Phase 1 New Delhi, India

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AOGD 2026

48th Annual Conference of AOGD

THEME

With HER (Heal, Empower, Respect) ...
..... Every Step of the way!!!

ORGANIZED BY:

Department of Obstetrics and Gynaecology,
AIIMS, New Delhi, India

10th–11th Sep 2026
Pre-Conference Workshops

12th–13th Sep 2026
Conference

SHOWCASE YOUR
RESEARCH!
SUBMIT YOUR
COMPETITION
PAPER BY

15TH JULY 2026

www.aogd2026.com

SCAN TO VISIT



CONFERENCE THEMES

High-Risk Obstetrics

Gynaecological Oncology

Endoscopy

Reproductive Endocrinology

Urogynaecology

Contraception

Quality Improvement and
Experience of Care

Miscellaneous



Venue: India Habitat Centre, New Delhi

Last Date for Abstract Submission is 10th August, 2026

AOGD Secretariat

Department of Obstetric and Gynaecology AIIMS,
New Delhi

Email: aogdaiims2026@gmail.com

Conference Managers

For any queries, please contact:

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HANDS-ON WORKSHOP

SCAN TO SCOPE

LEARN • PRACTICE • EXCEL



1ST & 2ND AUGUST 2026

ORGANISED BY
INDIAN FERTILITY SOCIETY (IFS)

In collaboration with
SIG ULTRASOUND AND SIG ENDOSCOPY



Department of Obstetrics and Gynecology
AIIMS, New Delhi

Workshop Fee: ₹23,600 (inclusive of GST)



EXCLUSIVELY FOR **20** CANDIDATES



HIGHLIGHTS



Knobology and basics of
USG by experts



Hands on experience on
ultrasound and laparoscopy
simulator



Imaging and surgical
congruence



WHO SHOULD ATTEND



Practising fertility
specialists



Gyne Endoscopic
surgeons



Gyne
Radiologists



Scan with precision, Scope with confidence

SUPPORTED BY



GE HealthCare



KARL STORZ—ENDOSCOPE

FOR WORKSHOP REGISTRATION AND DETAILS, KINDLY CONTACT:



Dr Aditya Sarkar – 7003235138



Mr Santosh – 9136789307



indianfertilitysocietydelhi@gmail.com

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UTERINE CANCER AWARENESS MONTH

A GLIMPSE THROUGH

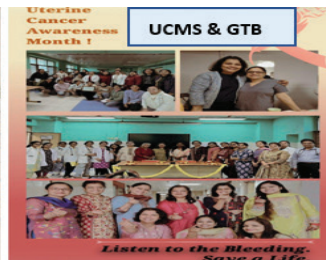
P(R)EACH FOR HER HEALTH

Awareness turned into Action

AOGD proudly commemorated June as uterine cancer awareness month. Throughout June, various hospital across Delhi came together to educate, empower and spread awareness through academic activities, patient education, campaigns and outreach programs.



AIIMS, Delhi



UCMS & GTB



Apollo Athena



Max Saket



DDU Hospital



RML Hospital



Sant Parmanand Hospital



FOGsd



LHMC & SSK Hospital

UNITED FOR AWARENESS
COMMITTED TO WOMEN'S HEALTH
AOGD INSPIRES.

Previous Events, June, 2026

The Department of Obstetrics & Gynaecology, AIIMS, New Delhi under aegis of AOGD in collaboration with IFS organized a Journal Club on 4th June 2026. In the Journal club, discussion of two important trials on use of oral GnRH antagonist in gynaecology (SPIRIT trial and Liberty trial) were discussed.



Department of Obstetrics and Gynaecology, LHMC under the aegis of Safe Motherhood Subcommittee of AOGD organized a "CME on Optimizing Labour Room Care: Updates on Best Practices and Protocols" on 7th June 2026 at MEU Hall, LHMC. Program highlights were: Providing Compassionate, Patient Centred Respectful Maternity Care, Labour Care Guide Implementation, CTG- Decoding the Patterns, Labour Analgesia- Holistic Approach, QI Tools & Methodology, Patient feedback and an Engaging panel on Infection Prevention. It was well attended by around 100 delegates including Nursing Officers, Post-Graduate students and Senior Residents.



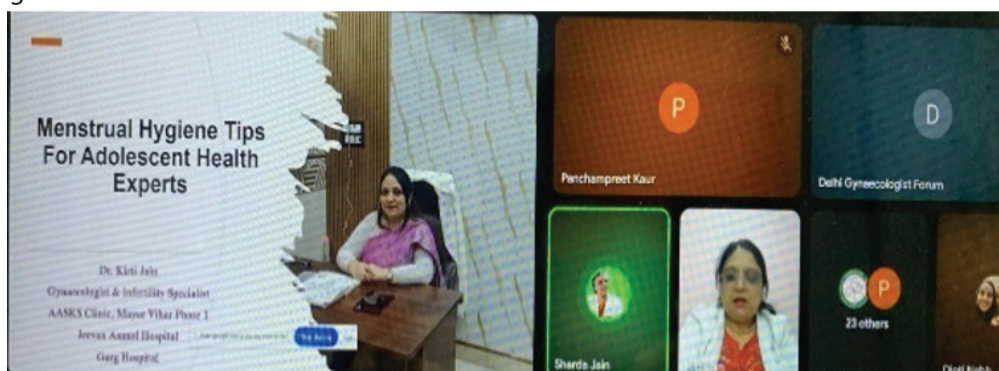
AOGD Public Awareness sub- committee conducted the academic event “The Breast Conclave” on 7th June 2026 at India Habitat Centre, New Delhi which was attended by 180 Breast Cancer Survivors & Nursing Students. It included skits on breast cancer awareness and breastfeeding myths, Zumba for lifestyle modification, and awareness messages promoting early detection and lactation support. Academic Sessions included keynote lectures, oration, and panels covered young survivors, benign disorders, screening, OPD management, Video demonstration and hands-on workshop trained delegates in Clinical Breast Examination and Core Biopsy. The conclave reinforced breast health as a core responsibility of every gynaecologist.



CME focused on the latest advances and evolving perspectives in menopause care conducted by Menopause & Geriatric Health subcommittee, in collaboration with the Delhi Menopause Society, on 10th June 2026. It was attended by almost 50 delegates and was very well appreciated. The Indian Menopause Society guidelines update for management were discussed by Dr Meenakshi and Dr Jyoti Bhaskar and there was very enthusiastic audience participation, the panel discussion was conducted by Dr Uma Vaidyanathan discussing special cases for management of special situations in menopause.



Adolescent health subcommittee, AOGD in association with Mission Adolescent Health subcommittee Delhi Gynae forum organized a webinar on 12th June 2026, Friday on two very important issues in Adolescents. Dr Panchampreet Kaur gave a talk on hypothyroidism and Dr Kirti Jain enlightened on importance of Menstrual Hygiene. The webinar was attended by over 30 delegates.



DGES 2026 Live Operative Annual Workshop conducted by DGES Society under the aegis of AOGD on 14th June 2026, at Hotel Jaypee Siddharth, New Delhi.

The AOGD Monthly Clinical Meeting (virtual) conducted by the Department of Obst & Gynae, Apollo Hospital on 19th June , 2026



AOGD MONTHLY CLINICAL MEETING

Presented by Apollo Hospital

Friday| 19th June 2026

AGENDA



 Virtual Meeting

4:00 – 4:10 PM

President's Address
Secretary's Report

4:10 – 4:55 PM

- 1) Acute pancreatitis in pregnancy
Dr Sohani Verma, Dr Avani Maheshwari, Dr Ruzda
- 2) An interesting case of 2nd time spontaneous uterine rupture in early third trimester of pregnancy
Dr Sushma P Sinha, Dr Palak Jain, Dr Kritika Dhingra
- 3) Plugging the culprit vessel : Rare case of antenatal embolization of Chorangioma in a DCDA Twin Pregnancy
Dr Vaishnavi Verma, Dr. Akshatha Prabhu, Dr Anita Kaul

4:55 - 5:00 PM

Audience Interaction

[Click Here to Join the Meeting](#)



Dr Neena Malhotra
President



Dr Neeta Singh
Vice President



Dr K Aparna Sharma
Secretary



Dr Neelam Suri
Senior Consultant & Academic Advisor
Apollo Hospital

The Adolescent health subcommittee , AOGD organised a highly engaging scientific session on 19th June 2026 at The Lalit, New Delhi which was attended by more than 60 delegates. The academic deliberations focused on important and evolving aspect of adolescent health especially PMOS - the new definition and it's clinical relevance. The session also covered pharmacotherapy of obesity in adolescents highlighting rational evidence based and safe approaches along with management of skin lesions in adolescent PMOS.



The Community Health & Public Awareness Subcommittee, AOGD, in collaboration with FOGSI and AMOGS, successfully organized the SATHI (Strengthening Allied Healthcare Through Holistic Nursing Initiatives) SMART Nursing webinar on 24th June 2026. The webinar commenced with a message from Dr. Bhaskar Pal, President, FOGSI, emphasizing the importance of empowering nursing professionals through structured training. Dr. K. Aparna Sharma, Honorary Secretary, AOGD, addressed the participants and appreciated the initiative. The webinar received an overwhelming response, with more than 450 registrations from staff nurses, from across Delhi and NCR. Communication Skills, Respectful Maternity Care, Breaking Bad News, & Emergencies like PPH Eclampsia were covered by Dr Dipika Loganey & Dr Divya Singhal.

A Public Awareness CME on Menopausal Health was organized by the Institute of Obstetrics & Gynaecology, Sir Ganga Ram Hospital, under the aegis of the Clinical Research Committee of FOGSI and the Public Awareness Sub Committee of AOGD, in association with the Delhi Menopause Society on 26th June, 2026. The CME witnessed excellent participation from practicing obstetricians and gynaecologists and nurses and featured expert lectures, panel discussions, and interactive case-based deliberations on various aspects of menopausal health, including clinical evaluation, menopausal hormone therapy, and individualized management strategies.

Members of the Public Awareness Committee of AOGD actively contributed as faculty during the CME. Dr. Mala Srivastav, delivered a lecture on the therapeutic application of Evening Primrose Oil (EPO) in gynaecology. Dr. Preeti Gaur and Dr. Surekha Jain served as chairpersons for the scientific sessions, while Dr. Dipika Loganey participated as a panelist in the case-based discussion on "Menopausal Hormone Therapy in Different Situations." The collective involvement of PAC members reflected the committee's active contribution to the academic success of the CME.



Department of Obstetrics & Gynae, AIIMS, New Delhi in association with AOGD Oncology subcommittee, conducted a CME on “Contemporary Issues in Uterine Cancer: Redefining Clinical Practice” on 29.06.2026 at Seminar Room, Mother & Child Block, AIIMS, New Delhi. This event brought together experts in the field of gynaecologic oncology and discussions on latest advances in molecular classification, risk stratification and emerging clinical trials etc. were done. Quiz for postgraduate and super-speciality students was also conducted and certificates were distributed to winners.



Hands on workshop on “From Follicle to Fertility – Mastering QI & IUI Cycles” was conducted by Department of Obstt. & Gynae, UCMS & GTB Hospital under the aegis of AOGD Infertility & Reproductive Endocrinology Subcommittee on 30.06.2026.



Association of Obstetricians & Gynaecologists of Delhi

MEMBERSHIP FORM

Name:.....

Surname:

Qualification (with year):

Postal Address:

City:..... State: Pin code:

Place of Working:

Residence Ph. No. Clinical / Hospital Ph. No.

Mobile No:..... Email:

Gender: Male:..... Female:.....

Date of Birth: Date.....Month Year.....

Member of Any Society:.....

Cheque/DD / No:

Cheque/Demand Draft should be drawn in favour of: AOGD 2026

FOR ONLINE TRANSFER THROUGH NEFT/RTGS

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Account no: 45142130513

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Branch: AIIMS, New Delhi

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MICR code: 110002005

For Life Membership : Rs. 11,000 + Rs. 1,980 (18% GST applicable) = Rs. 12,980/-

For New Annual Membership* : Rs. 2,000 + Rs. 360 (18% GST applicable) = Rs. 2,360/-

For Old Renewal Membership+ : Rs. 1,200 + Rs. 216 (18% GST applicable) = Rs. 1,416

Entrance Fees (Payable once) : Rs. 400/-

Encl.: Attach Two Photocopies of All Degrees, DMC Certificate and Two Photographs (Self attested)

* Annual Membership is for the calendar year January to December.

* In case of renewal, mention old membership number.

* Life membership on or after 1st January, 2022 shall have to renew the life membership after 20 years. The minimum renewal amount will be 25% of the prevailing subscription fee at time of renewal.

Note: 18% GST will be applicable as FOGSI requires it.

Send Complete Membership Form Along with Cheque / DD and Photocopy of required documents to the secretariat.

For online transaction send scan copy of all documents with payment slip on given mail id



Secretariat

AOGD Office, Room No. 714, 7th Floor, Mother & Child Block, Department of Obstetric and Gynaecology, All India Institute of Medical Science (AIIMS), New Delhi- 110029

Tel.: 011-29576771, (M): 9717392924 | Email Id: aogdaiims2026@gmail.com

AOGD SECRETARIAT

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