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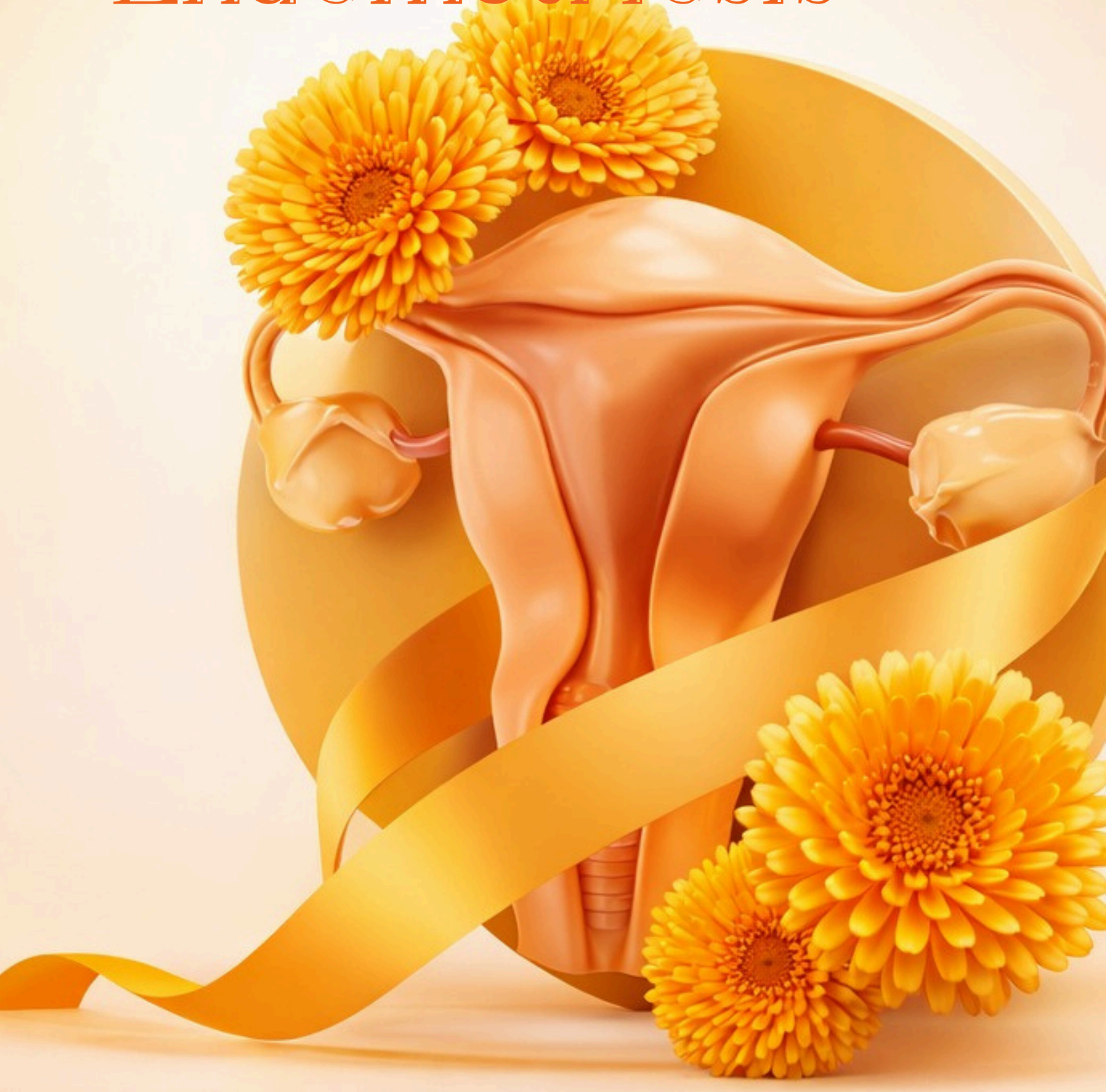
Endometriosis



Key Practice Points

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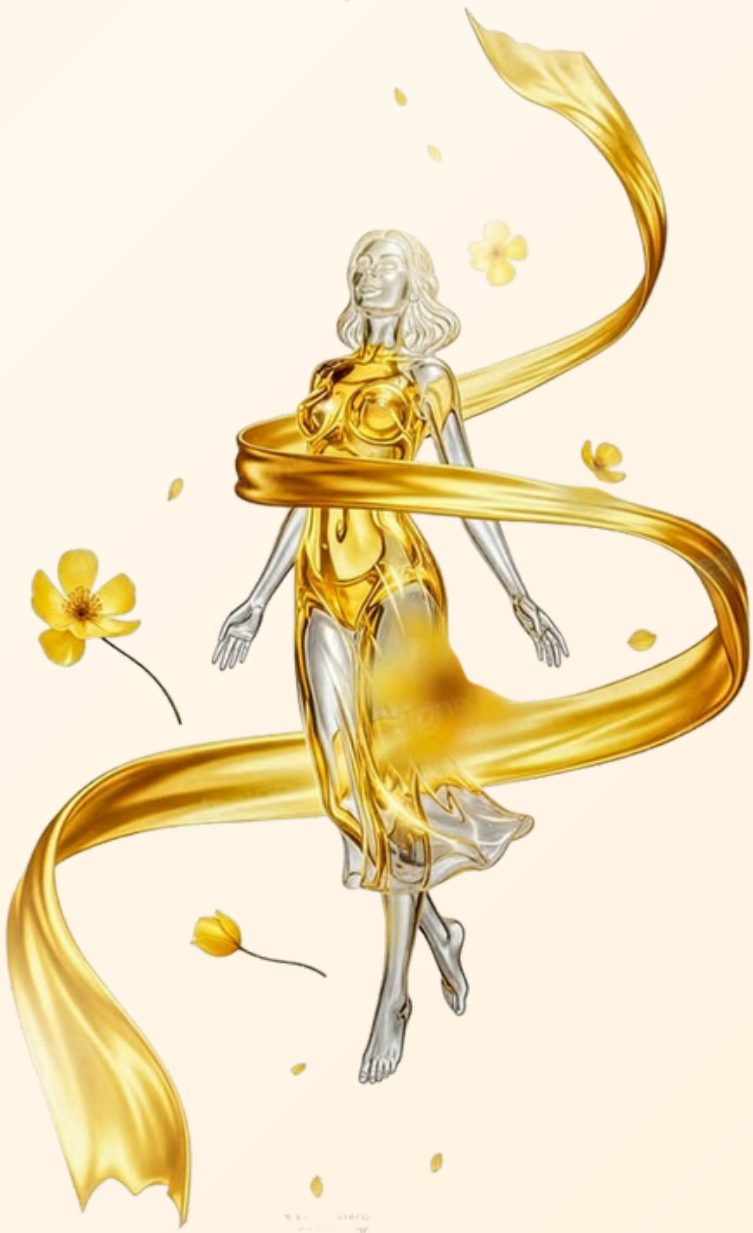

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President & Secretary's Message

Greetings from Team IAGE,

It is our pleasure and privilege to present before you the Good Practice Points for the management of common problems in gynaecology.

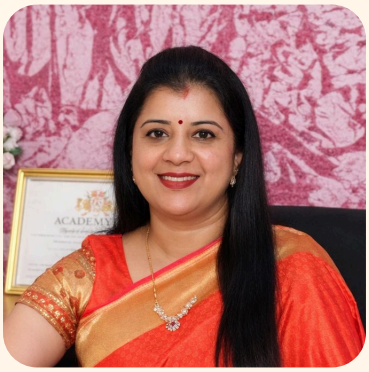
Gynaecological conditions are often complex and varied in their presentation, with significant variability in patient response to treatment. These guidelines have been developed to support clinicians in delivering consistent, evidence-based, and patient-centered care in their day-to-day practice.

We extend our sincere congratulations to everyone who has contributed to the development of these guidelines. Your dedication and expertise have been invaluable in shaping this important work. We would like to especially acknowledge Dr. Bhaskar Pal for the tremendous effort and diligence invested in this initiative, as well as Dr. Atul Ghanatra for his leadership during whose tenure this work was accomplished.

We also express my heartfelt gratitude to IAGE for providing us with this opportunity to contribute towards advancing clinical practice and improving patient outcomes in gynaecological care.

Thank you.

Best wishes
Dr Sudha Tandon
President IAGE
(2026-2027)



Best wishes
Dr Vidya Bhat
Secretary IAGE
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Endometriosis is a chronic inflammatory, estrogen-dependent condition characterized by the presence of endometrial-like tissue outside the uterine cavity. It commonly affects the pelvic peritoneum, ovaries, uterosacral ligaments, rectovaginal septum, and occasionally extra-pelvic organs such as the bowel, bladder, diaphragm, and lungs. The disease affects approximately 10% of individuals of reproductive age assigned female at birth and is a major cause of chronic pelvic pain, dysmenorrhea, dyspareunia, and infertility.

Recent clinical evidence and updated international guidelines emphasize a shift in the diagnostic and therapeutic approach to endometriosis. Contemporary recommendations from organizations such as the European Society of Human Reproduction and Embryology (ESHRE), the National Institute for Health and Care Excellence (NICE), and the American College of Obstetricians and Gynecologists (ACOG) advocate a **symptom-based, imaging-first strategy for diagnosis,** with laparoscopy no longer considered mandatory in all cases. Instead, minimally invasive imaging techniques, particularly transvaginal ultrasound performed by experienced operators, are now central to initial evaluation.

Management strategies have also evolved to emphasize **patient-centered care**, focusing on symptom relief, preservation of fertility when desired, and improvement in quality of life. First-line therapy generally consists of analgesics such as nonsteroidal anti-inflammatory drugs (NSAIDs) combined with hormonal suppression using combined oral contraceptives (COCs) or progestogen-based therapies. Long-acting hormonal devices, including the levonorgestrel intrauterine system (LNG-IUS), are also widely recommended for long-term symptom control.

For patients with persistent or refractory symptoms, second-line medical therapies are now available. Novel oral gonadotropin-releasing hormone (GnRH) antagonists such as elagolix, linzagolix, and relugolix represent important advances in treatment. These agents suppress ovarian estrogen production and have demonstrated efficacy in reducing pain associated with endometriosis. Because prolonged estrogen suppression may lead to hypoestrogenic side effects, including decreased bone mineral density, add-back hormonal therapy is often recommended during treatment.

Surgical intervention remains an important therapeutic option in selected cases. Laparoscopic excision of endometriotic lesions may be indicated for persistent pain that does not respond to medical therapy or when infertility is a primary concern. Surgical management emphasizes complete excision of lesions, careful preservation of ovarian tissue, and multidisciplinary collaboration when deep infiltrating endometriosis involves organs such as the bowel or bladder.

Importantly, several procedures historically used in the treatment of endometriosis, such as laparoscopic uterosacral nerve ablation (LUNA) and presacral neurectomy (PSN), are no longer recommended because evidence has shown limited efficacy and potential complications.

Overall, current practice guidelines stress a **comprehensive and individualized**

management strategy that integrates accurate diagnosis, stepwise medical therapy, judicious use of surgery, and long-term follow-up. Effective care requires collaboration between gynecologists, pain specialists, physiotherapists, psychologists, and fertility experts to address the complex and multifaceted impact of endometriosis on patients' lives.

Executive Summary:

Recent evidence and updated guidelines (ESHRE 2022, NICE 2024/2025, ACOG 2026) support a **symptom-based, imaging-first diagnostic approach** for endometriosis, with **laparoscopy reserved for selected cases.** First-line therapy emphasizes **combined analgesia (NSAIDs) and hormonal suppression using combined oral contraceptives (COCs) or progestogens/levonorgestrel intrauterine systems (LNG-IUS).** Novel **GnRH antagonists** (elagolix, linzagolix, relugolix) are now recommended as **second-line therapy** for refractory pain, alongside **add-back hormones** to reduce bone loss. Surgical intervention, particularly **laparoscopic excision of lesions**, is indicated for persistent pain or infertility, with strategies that prioritize **fertility preservation and multidisciplinary care**. Key updates include discontinuing outdated procedures (e.g., LUNA, PSN) and emphasizing **evidence-based, patient-centred management.**

Diagnostic Approach

Endometriosis should be suspected in individuals assigned female at birth who present with symptoms suggestive of chronic pelvic pathology, particularly when symptoms are cyclical or worsen during menstruation. Although the condition most commonly affects individuals in their reproductive years, it can also occur in adolescents shortly after menarche and may persist into perimenopause. Awareness of diverse clinical presentations is therefore essential for early detection.

Typical symptoms prompting clinical suspicion include chronic pelvic pain, severe dysmenorrhea that interferes with daily activities, deep dyspareunia, infertility, and cyclic gastrointestinal or urinary symptoms such as painful bowel movements, bloating, or dysuria during menstruation. In adolescents, symptoms may present primarily as severe dysmenorrhea that is unresponsive to conventional analgesics.

A thorough clinical history is essential for identifying individuals at increased risk. Important risk factors include a positive family history of endometriosis, early onset of menarche, short menstrual cycles, heavy menstrual bleeding, and congenital Müllerian anomalies. Genetic susceptibility appears to play a role, as first-degree relatives of affected individuals have a significantly higher risk of developing the disease.

Because endometriosis is a chronic condition that often evolves over time, clinicians should consider the duration and progression of symptoms. Pain that worsens gradually over several years or becomes increasingly resistant to standard analgesics should raise suspicion for underlying endometriosis.

Early recognition is particularly important because delayed diagnosis is common, with many patients experiencing symptoms for several years before receiving

appropriate evaluation. Such delays can result in worsening disease severity, decreased quality of life, and potential impacts on fertility.

Pelvic Examination

A pelvic examination remains an important component of the clinical assessment, particularly in adult patients presenting with chronic pelvic pain or suspected endometriosis. The examination may reveal physical findings that support the diagnosis, although normal findings do not exclude the presence of disease.

During bimanual pelvic examination, clinicians may detect tenderness in the posterior vaginal fornix, nodularity along the uterosacral ligaments, reduced uterine mobility due to adhesions, or adnexal masses suggestive of ovarian endometriomas. A retroverted and fixed uterus may also be present in advanced disease.

However, early or superficial endometriosis may not produce detectable abnormalities on examination. Therefore, the absence of physical findings should not lead to dismissal of the patient's symptoms.

In adolescents, pelvic examination may be challenging due to patient discomfort, lack of sexual activity, or psychological distress. In such cases, the examination should only be performed when appropriate and with the patient's assent and parental consent when required. If a pelvic examination cannot be performed, clinicians may rely on symptom assessment and non-invasive imaging modalities.

A trauma-informed approach is essential during pelvic examination, particularly for individuals who may have experienced prior negative healthcare encounters. Clear communication, respect for patient autonomy, and attention to comfort can improve the clinical experience and encourage ongoing engagement in care.

Imaging

Imaging plays a central role in the modern diagnostic approach to endometriosis. Current guidelines recommend **transvaginal ultrasound (TVUS) as the first-line imaging modality** for individuals with suspected disease.

TVUS is particularly effective in detecting ovarian endometriomas, which appear as cystic ovarian masses with characteristic "ground glass" echogenicity. In addition, skilled sonographers can identify deep infiltrating endometriosis affecting structures such as the uterosacral ligaments, rectovaginal septum, and bowel.

When transvaginal ultrasound is contraindicated, declined, or not feasible, transabdominal pelvic ultrasound may be performed as an alternative. Although less sensitive for deep lesions, abdominal ultrasound can still detect large endometriomas or pelvic masses.

Importantly, a normal ultrasound does not exclude endometriosis. Superficial peritoneal lesions may not be visible on imaging studies, and patients with persistent symptoms should continue to receive appropriate clinical evaluation and management.

In cases where deep infiltrating endometriosis is suspected, referral for **expert**

ultrasound mapping or pelvic magnetic resonance imaging (MRI) is recommended. MRI provides excellent soft tissue contrast and can help identify lesions affecting the bowel, bladder, ureters, or rectovaginal septum. Preoperative imaging is particularly useful for surgical planning when complex disease is present.

Biomarkers

Despite ongoing research efforts, no reliable noninvasive biomarker currently exists for the diagnosis of endometriosis. Serum markers such as CA-125 have historically been investigated, but their sensitivity and specificity are insufficient for routine clinical use.

CA-125 levels may be elevated in advanced disease or ovarian endometriomas, but they can also increase in many other conditions, including pelvic inflammatory disease, ovarian cancer, menstruation, and pregnancy. As a result, reliance on CA-125 for diagnostic purposes may lead to misinterpretation and unnecessary investigations.

Current research is exploring novel biomarkers such as circulating microRNAs, inflammatory cytokines, and proteomic signatures. While some early studies show promise, these markers have not yet been validated for clinical use.

Therefore, current guidelines strongly recommend **against using serum biomarkers as the primary diagnostic tool** for endometriosis.

Laparoscopy

Historically, laparoscopic visualization with histological confirmation was considered the gold standard for diagnosing endometriosis. However, contemporary guidelines recognize that surgical diagnosis is not always necessary, particularly when symptoms and imaging findings strongly suggest the condition.

Laparoscopy is now reserved for selected situations, including cases where symptoms persist despite medical therapy, imaging results are inconclusive, or surgical treatment is planned. The procedure allows direct visualization of endometriotic lesions, which may appear as black, red, white, or yellow deposits on peritoneal surfaces.

During diagnostic laparoscopy, a systematic inspection of all pelvic structures should be performed. This includes evaluation of the ovaries, fallopian tubes, pelvic peritoneum, uterosacral ligaments, bladder peritoneum, and bowel surfaces. Biopsy of suspicious lesions may be obtained to confirm the diagnosis.

It is important to note that a negative histological result does not necessarily exclude endometriosis, particularly when lesions are small or sampling is limited. When laparoscopy does not reveal visible disease, clinicians should discuss alternative diagnoses with the patient and focus on symptom-based management.

Management Overview:

Multidisciplinary Care: Optimal management involves collaboration with **pain specialists, physiotherapists, psychologists, and fertility experts.** Shared decision-

making centred on patient goals—pain relief versus fertility preservation—is essential.

1. **Analgesics:** Start with **NSAIDs or paracetamol** for ~3 months. If ineffective, consider **neuropathic agents** such as gabapentin or tricyclic antidepressants.
2. **First-Line Hormonal Therapy:** COCs or progestogens (oral or LNG-IUS) are recommended to reduce pain and lesion activity. Extended-cycle or continuous regimens may improve dysmenorrhea. Monitor for **bleeding irregularities, mood changes, and metabolic effects.**
3. **LNG-IUS/Subdermal Implants:** Effective for dysmenorrhea and chronic pelvic pain; induce uterine suppression while preserving fertility.
4. **Second-Line Hormonal Therapy:** For refractory pain, **GnRH agonists** (e.g., leuprolide) or **oral GnRH antagonists** (elagolix, relugolix, linzagolix) with **add-back therapy** can be used for 6–12 months. Monitor for **hypoestrogenic effects, bone density changes, and lipid alterations.**
5. **Third-Line Therapy: Aromatase inhibitors** (e.g., letrozole) may be used in combination with other agents for refractory cases, with careful monitoring.
6. **Non-Pharmacological Therapies:** Encourage **exercise, pelvic physiotherapy, dietary modifications, and cognitive-behavioral therapy**. Evidence for complementary therapies (e.g., acupuncture, traditional medicine) is limited.

Surgical Management

- **Minimally Invasive Surgery:** Laparoscopy is preferred. Open surgery is reserved for contraindications.
- **Operative Principles:** Excise peritoneal lesions rather than ablate superficially. For ovarian endometriomas, cystectomy is preferred over drainage to improve pain and fertility outcomes while minimizing ovarian damage.
- **Deep Endometriosis:** Referral to a multidisciplinary team (including urologists or general surgeons) is recommended. Nerve-sparing excision is preferred. Preoperative GnRH therapy may be considered to reduce lesion size.
- **Adenomyosis & Hysterectomy:** Surgery should be individualized. Hysterectomy with/without bilateral salpingo-oophorectomy is reserved for cases where conservative therapy has failed and fertility is complete; it does not guarantee complete pain relief.
- **Avoid Outdated Procedures:** LUNA and presacral neurectomy are no longer recommended due to lack of efficacy.

Infertility-Focused Management

- **Evaluation:** Standard fertility workup including ovarian reserve, tubal patency, and semen analysis.
- **Conservative Surgery:** Laparoscopic lesion excision or cystectomy improves spontaneous pregnancy rates in mild disease. Minimize ovarian reserve damage.
- **Assisted Reproduction:** IVF or ICSI may be indicated, particularly when other infertility factors coexist. Surgery prior to IVF is selective.
- **Fertility Preservation:** Oocyte or embryo freezing may be considered in severe ovarian disease or before surgery.

Patient Counseling and Education

- Explain the **chronicity** and **recurrence risk** (20–40% within 5 years).
- Set **realistic expectations** for pain control and fertility.
- Discuss **treatment options, side effects, and monitoring needs**.
- Encourage a **symptom diary, lifestyle optimization, psychological support**, and adherence to follow-up schedules.

Follow-Up Recommendations

- **Post-Therapy:** Reassess every 3–6 months; extend to 6–12 months if stable.
- **Post-Surgery:** Initial review at 6–8 weeks; subsequent follow-ups every 3–6 months.
- **Long-Term Monitoring:** Annual reviews if chronic therapy continues; monitor bone density in patients on GnRH analogs.
- **Adolescents:** More frequent early follow-up to ensure compliance and monitor growth.

Research Gaps

- **Non-invasive Biomarkers:** No validated early diagnostic markers exist.
- **Long-Term Safety of GnRH Antagonists:** Limited evidence beyond 12 months.
- **Adolescent-Specific Data:** Most recommendations are extrapolated from adult studies.
- **Multidisciplinary Care Models:** Need quantification of benefits for pain and quality of life.
- **Fertility Preservation:** Optimal timing and outcomes remain unclear.
- **Pathophysiology & Prevention:** Further research is needed for targeted therapies.
- **Adjunctive Therapies:** Rigorous trials are lacking for complementary interventions.

Table 1. Hormonal Therapies for Endometriosis Pain Management

Treatment	Pain Efficacy	Side Effects	Indications/Notes
NSAIDs / Paracetamol	Modest short-term relief	GI upset, renal risk (NSAIDs)	First-line analgesia; safe, over- the-counter option.
COCP (Combined OC)	Good for dysmenorrhea and cyclic pain	Thrombosis risk, mood changes	First-line hormonal; contraception.
Oral Progestins	Good pain relief (equivalent to GnRH-a)	Irregular bleeding, weight gain, mood swings, BMD loss (long-term)	First-line or if estrogen contraindicated (e.g. dienogest, medroxyprogesterone) .

LNG-IUS	Very effective for dysmenorrhea and pelvic pain	Irregular bleed, amenorrhea, breast tenderness	Long-term use; amenorrhea effect; fertility sparing.
GnRH Agonists	Very high (6 mo) for pain	Menopausal symptoms, bone loss	Second-line (with add-back) for refractory pain.
GnRH Antagonists	Very high (elog-/ linza-/relu- effective)	Hot flashes, bone loss (mitigated by add-back)	Second-line alternative to GnRH-a (e.g. elagolix, linzagolix).
Aromatase Inhibitors	Moderate (used in refractory cases)	Hot flashes, bone loss, arthralgias	Third-line; usually add to another therapy.

Table 2. Table showing the various surgical treatments for Endometriosis

Procedure	Outcome/Pain Effect	Fertility Effect	Notes
Excision of peritoneal lesions	Good pain relief and lower recurrence than ablation	Increases spontaneous pregnancy rates (mild disease)	Requires expertise; minimize organ injury.
Ovarian Cystectomy	Excellent pain/pregnancy outcomes vs drainage	Improves fertility but reduces ovarian reserve	Measure AMH pre-op; unilateral if possible.
Endometrioma Ablation/Drainage	Less pain relief; higher recurrence than excision	Slightly better ovarian reserve preservation than cystectomy	Consider if low reserve or bilateral.
Deep Endometriosis Excision	Significant pain relief (but risk of complications)	Fertility benefit unclear	Refer to multi-specialty surgical team.
Hysterectomy + BSO	Best chance for pain relief, but not guaranteed (15– 20% residual pain)	Fertility ends (HRT needed if BSO)	Last resort; remove all visible lesions

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3. ACOG Clinical Guidelines, 2026
4. Korean OB/GYN Guidelines, 2024
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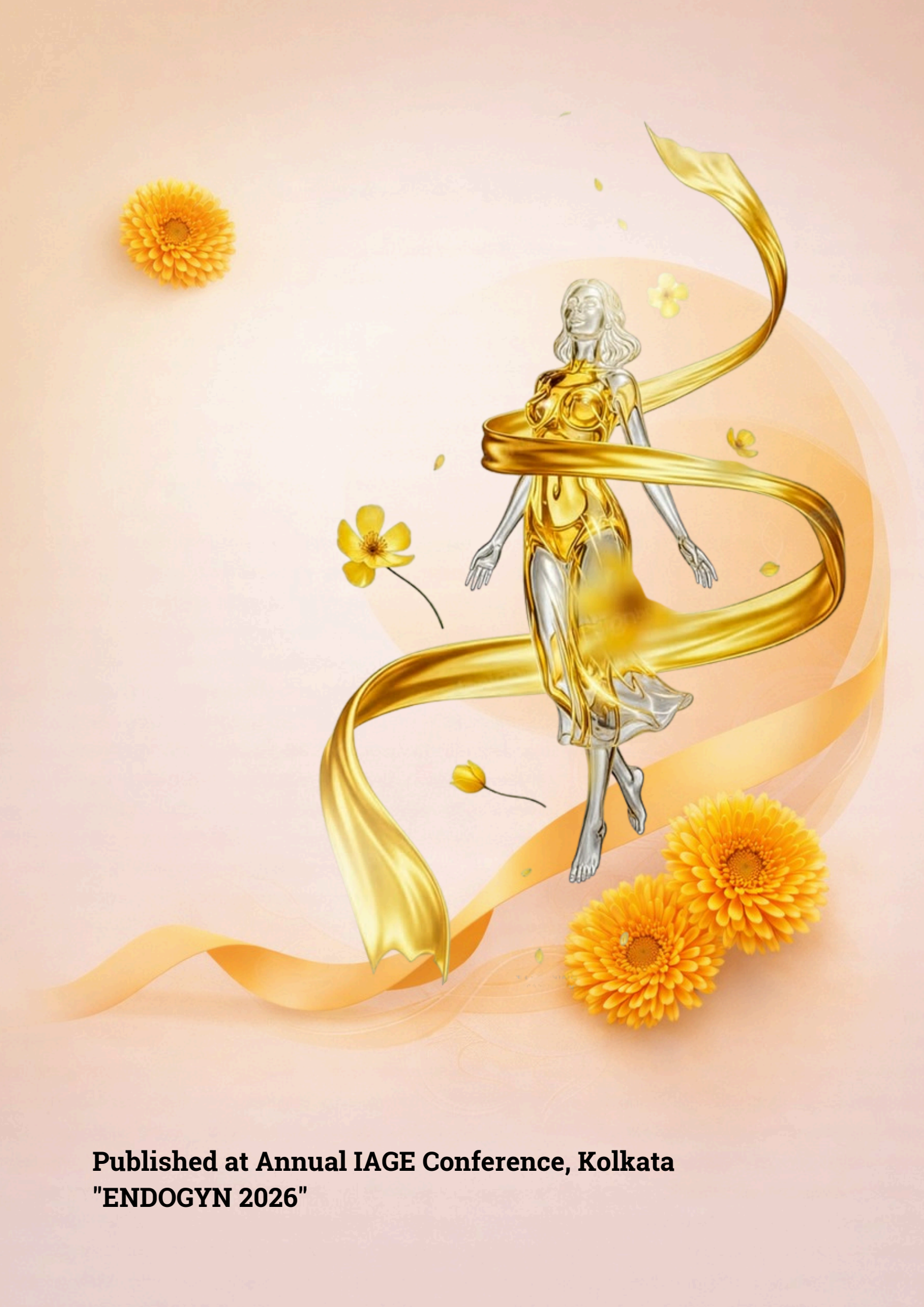

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