REI UPDATE

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No Disclosures
 General topics

 ZIKA
 Asymptomatic fibroids
 Metformin for ovulation induction in PCOS

 ART topics

 Fertility Coverage
 Pre-implantation genetic testing –
   Aneuploidy
   adult monogenic diseases
 The role of immunotherapy in ART
 Posthumous retrieval and use of gametes or embryos
Question 1:

Patient JH comes to your office for anovulation desiring fertility treatment. During the evaluation, she says they will have to hold off on the HSG because they are going on a trip to Mexico together. According to the CDC, how long should this couple wait to conceive if they go to this region and receive mosquito bites, but report no illnesses?

- 0 months
- 2 months
- 3 months
- 4 months
- 6 months
ZIKA Virus

- Asymptomatic + possible exposure:
  Women – wait 8 weeks & Men – wait 3 months
- Limitations of testing should be explained
- If NAT testing done & +, do not attempt conception until NAT is negative on both & wait times passed
  * testing may be costly
  * Negative testing does not confer virus in semen or other bodily fluids
- WHO recommends 6 mo
Question 2:

Which type of myomectomy is most likely to improve pregnancy rates for someone with the diagnosis of infertility who has regular menses with normal frequency, duration, length, and intensity?

- Hysteroscopic myomectomy of a 1.5 cm submucosal myoma
- Laparoscopic myomectomy of a 4 cm intramural myoma not impinging on the cavity
- Open myomectomy of multiple intramural and subserosal myomata not impinging on the cavity
- None of the above
Asymptomatic Fibroids

- Cavity Distorting intramural w/ submucosal or submucosal alone
  - Treatment improves pregnancy rates

- Non-cavity distorting IM or SS
  - Unlikely to improve pregnancy outcomes
  - May improve oocyte retrieval if severe pelvic anatomy distortion
  - Insufficient evidence of reduced SAB rate w/ tx
Leiomyoma Subclassification System

SM - Submucosal

0  Pedunculated Intracavitary
1  <50% Intramural
2  ≥50% Intramural

O - Other

3  Contacts endometrium; 100% Intramural
4  Intramural
5  Subserosal ≥50% Intramural
6  Subserosal <50% Intramural
7  Subserosal Pedunculated
8  Other (specify e.g. cervical, parasitic)

Hybrid Leiomyomas (impact both endometrium and serosa)

2-5  Submucosal and subserosal, each with less than half the diameter in the endometrial and peritoneal cavities, respectively.
Question 3:

Patient KB presents with PCOS diagnosed using the Rotterdam Criteria. She desires pregnancy. She has menstrual cycles every 40-48 days. During the evaluation, you note that she has a BMI of 40, testosterone of 70 ng/dL, A1c of 6.1.% and fasting glucose of 105 mg/dL. What is the best initial treatment for anovulation for this patient?

- Metformin
- Letrozole
- Gonadotropins
- Provera
Metformin for PCOS ovulation induction

- Should not be typically used for first-line therapy
- Does not have risk of multiples
- May improve LBR with CC resistance (nebulous)
- Other subgroups for benefit have not been clearly demonstrated
- Utilize as indicated for diabetes & pre-diabetes
Patient AS presents with surgically diagnosed endometriosis resulting in severe dysmenorrhea and dyspareunia. Surgery was fairly effective for pain relief for 14 months. Since then, OCP management was modestly effective but she was poorly tolerant of side effects of nausea and irritability. She would like to try getting pregnant in about 6-18 months but in the meantime would like to have improvement in her clinical symptoms. She is anxious and wants to avoid using something that “stays in the body too long”. Which of the following would be the treatment option that best suits her goals?

- Levonorgestrel IUD
- Letrozole 2.5 mg daily
- Elagolix 150mg daily
- Elagolix 200mg twice daily
Elagolix

GnRH receptor antagonist

- Competes w/ GnRH and competitively binds receptor w/o stimulating it
- Oral, 2 doses 150mg qd & 200mg bid

- Often continue having menses but lighter
- Non-contraceptive
- Watch for depression exacerbation
- Risk of elevated ALT
- Contraindicated w/ cyclosporine, gemfibrozil and other OATP 1B1 inhibitors
IVF

UPDATES
There remains insufficient evidence to recommend routine use of biopsy in all infertile patients.

False positive results, mosaicism concerns remain.

Cost-effectiveness is difficult to quantify – variable costs, intangible costs of miscarriage, obstetric/neonatal costs of multiples/aneuploidy; one RPL vs. CEM study did not show cost-effectiveness (lower SAB, lower LBR).
PGT-Monogenic for adult-onset conditions

- Ethically justifiable if condition is serious & there are no interventions or interventions are poorly effective/sign.
- Burden
  - Less serious: ethically acceptable as a matter of reproductive liberty
  - Balance lack of knowledge of long-term risk of biopsy
  - No requirement for clinics to transfer “affected” embryos, notify in advance
The role of Immunotherapy in ART

- Recommend against routine LDA, routine corticosteroids during stim or transfer
- Insufficient evidence for or against: local G-CSF for thin endometrium; local or systemic G-CSF/FM-CSF for IVF in general
- Insufficient evidence to routinely recommend IV fat emulsions, IVIG, autologous peripheral mononuclear cells or adalimumab
- Fair evidence seminal plasma insemination improves CPR but not LBR
- No clear benefit of any of the treatments therefore appropriate consent is recommended & preferably done within quality trials
Posthumous retrieval and usage of gametes or embryos

• Justifiable if written documentation from the deceased exists
• Programs not ethically obligated to participate
• In absence of written documentation, requests should only be considered from surviving spouse or partner
• State laws vary on legality of the process and on legal status of offspring
They include mandatory IVF coverage of 6 retrievals (prior to 45) & unlimited ET (prior to 50) per lifetime in their statute.

Maximum requirement of 3 OI cycles and none if IVF is medically necessary.

Delaware became the 16th state to have some level of mandatory infertility coverage and the 4th state to require fertility preservation for those undergoing iatrogenic infertility treatment.
Resources


Metformin: Fertil Steril 2017; 108:426-41


Elagolix: https://www.orilissa.com/hcp/clinical-data/clinical-trials