

Complications of ART

Associated with treatments:

- woman :
 - side effects of drugs
 - OHSS
 - Risk of anesthesia (or sedation)
 - Risk of Oocyte retrieval
- Man :
 - Risk of anesthesia
 - Risk of surgical sperm recovery

Associated with outcome:

- women :
 - multiple pregnancy
 - ~~metopic~~ endometriosis
- children :
 - ~~congenit~~ ART in singleton pregnancy

Further evidence is required

- woman :
 - Breast cancer (<25 years)
 - Borderline ovarian tumor
- children :
 - children cancer risk
 - imprinting disorder

Evidence against

↳ early menopause

OHSS : definition

- Pathogenesis
- stages
- Prevention
- ITT
- risk factors

* Multiple pregnancy:

- Risk for multiple pregnancy : X20
- Risk for monozygotic twins : ++
 - ↳ ICSI > IVF
 - Blastocyst > cleavage stage transfer
- Prevention : - elective single ET
- Multiple pregnancy reduction

* Ectopic ~~pregnancy~~ / Heterotopic pregnancy:

- ectopic : 2-8% (N: 1-2%)
- Heterotopic : 8:1000 (N: 1:30000)

Pathogenesis:

- change in hormonal micro environment
 - ↳ loss of normal interaction between
 - ↳ endometrium
 - ↳ tube
 - ↳ embryo

- Embryo quality

NO

- ET technique stage

Complications of oocyte retrieval

Less Rare complications:

- severe intraabdominal bleeding
- pelvic infection

* Perinatal risk:

- see before → risks
- Mechanism

* Early menopause:

- Theoretical: increased risk
- Evidence: no increased risk

* Future evidence required (insufficient evidence) conflicting evidence

- + Women: • ++ Breast cancer (in under 25 years)
- ++ Borderline ovarian tumors

+ children:

- Cancer:
- - Congenital malformations: 7% (N ³ 5%) absolute
~~30% increase~~ relative

(N.B.) Genetic imprinting: - Prader Willi \$
- Angelman \$
- Beckwith-Wiedemann \$
- Wilms tumor

- Reduced semen parameters

Factors affecting ART outcomes

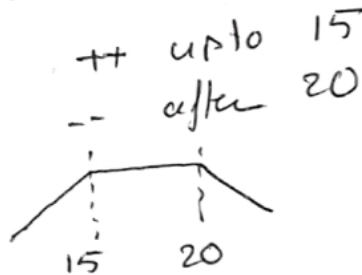
Patient related:

- Female age → established
- Prev obstetric H/O → established
- BMI → established → poor obstetric and neonatal outcomes
- conflicting → ART outcomes
- Life style → established

- (-) Ovarian reserve → established
- (-) Male factor

ART related:

- No of oocytes retrieved → established



- Embryo quality : → established
↳ Blastocyst → ++ live birth rate
- No of embryos : → established
↳ higher no → ++ live birth rate
→ ++ multiple birth rate
- Fertilisation method : routine ICSI for non-male factor → does not ++ live birth rate

- ## Male factor:
- Semen analysis → established
 - Anti sperm Ab → no role
 - sperm function → no role

Add-ons interventions to increase success rate

* No available evidence:

- Assisted hatching
- D3 PGS
- Reproductive immunology
- Intrauterine culture

* Growing body of evidence:

- Endometrial scratch
 - Elective freezing all embryos
 - D5 PGS
 - Hyaluronic acid
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- Time lapse imaging
 - Egg activation with calcium ionophore