Cardiovascular and Psychological Effects of Infertility and Its Treatments on Women in the United States

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RESULTS

WHO Classification of Maternal Cardiovascular Risks

- No increased risk of mortality, mild increase in morbidity: Follow up once or twice
- Small increase in mortality, moderate increase in morbidity: Follow up every trimester
- Significantly increased risk of mortality and morbidity: Expert counselling needed, Follow-up bi-monthly
- Extremely high risk of mortality and morbidity: Expert counselling needed, Follow-up monthly, Pregnancy not recommended

Cardiovascular Impacts of ART

Maternal
- Gestational Diabetes
- Hypertensive disorders of pregnancy
- Pre-eclampsia
- HELLP syndrome
- Obstetrical hemorrhage
- Endothelial dysfunctions

Fetal
- Preterm birth
- Low birth weight
- Early changes to vascular development and response
- Risk of cerebrovascular complication
- Risk of Cardiovascular disorders

% Prevalence of Adverse Outcomes of ART Associated Multiple Births

- Low quality of life
- Difficulty meeting material needs
- Maternal depression
- Maternal stress
- Lower marital satisfaction

- Singletons
- Twins
- Triplets

Adapted and modified from van Hagen, Roos-Hesselink, 2020

REFERENCES


FUTURE DIRECTIONS

- Develop tools for risk stratification and early intervention.
- Explore interventions to manage psychological distress and improve quality of life.

ADDITIONAL TEXT

- Multifaceted causes of infertility: Physical: BMI, Diet, Age, PCOS, Endometriosis, HTN, HLD
- Mental: Stress, Anxiety, Depression
- ART: Hormone fluctuations (ovulation through endogenous stimulation and exogenous estrogen)
- Stress causes further fluctuations in HPA axis and adrenocorticotropin releasing hormone
- Cardiovascular complications maternal and fetal (HDPs, GDM, preterm birth)
- Reproductive trauma from multiple births
- Altered immunomodulation exacerbating CV complications leading to long lasting impact such as chronic hypertension, metabolic syndrome
- Poor quality of life requiring interventions such as CBT and mind/body treatments

Need: multidisciplinary care team for preconception planning