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RECURRENT MISCARRIAGE – A LITERATURE REVIEW

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ABSTRACT:

The appropriate clinical care of women/couples with infertility experiencing recurrent miscarriage (RM) is overlooked in international guidelines. We sought to evaluate care provision for women/couples with RM and infertility across public (19 clinics providing RM care, five fertility clinics) and private sectors (nine fertility clinics) using adapted guideline-based key performance indicators (KPIs) for RM. An online survey comprised of multiple-choice/open questions was administered via Qualtrics from November 2021 to February 2022, encompassing:(i) structure of care, (ii) investigations, (iii) treatments, (iv)counselling/supportive care and (v) outcomes. Clinical leads for pregnancy loss and fertility and clinical nurse/midwife specialists within each unit/clinic were invited to participate.

KEYWORDS:

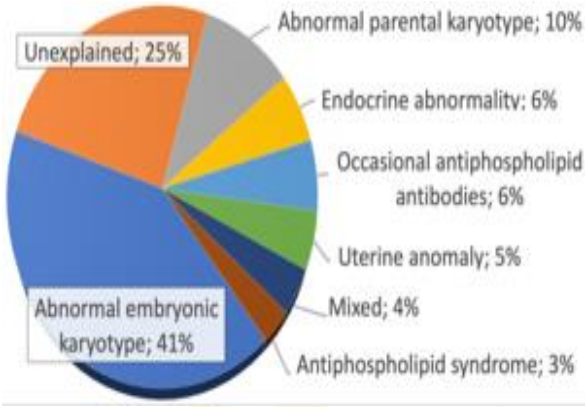
- Miscarriage
- Infertility

INTRODUCTION:

Recurrent miscarriage is the spontaneous loss of three or more consecutive pregnancies with the same biological father in the first trimester, and affects 1% to 2% of women, half of whom have no identifiable cause. Overall, 75% of affected women will have a successful subsequent pregnancy, but this rate falls for older mothers and with increasing number of miscarriages. The traditional definition and care model for recurrent miscarriage (RM) whereby three consecutive miscarriages are the threshold for investigation, treatment or supportive care has been challenged recently (Bhattacharya et al. Citation2010).

INCIDENCE

WHO criterion, the prevalence was 5.29%. In a previous study, recurrent pregnancy loss affects approximately 1 to 2% of women taking into consideration three consecutive pregnancy losses occurring before 20 weeks of gestation (16).



CAUSES:

- Parental chromosomal abnormalities.
- Uterine malformations
- Infections
- Endocrine disorders
- Autoimmune defects
- Idiopathic.

Genetics -A genetic abnormality with a developing embryo that affects one or both parents can result in recurrent miscarriages. Usually, it is believed that 50–70% of all early pregnancy losses are caused by defects in the chromosomal makeup of an embryo. These embryos tend to occur more during the oocyte (egg) maturation process and less during sperm mutation.

Hormonal Disorder — The diseases that affect the endocrine system are mild and do not increase the chances of a miscarriage. However, certain disorders, such as uncontrolled diabetes or thyroid diseases, can increase the risk of miscarriage.

PATHOPHYSIOLOGY

RPL is a multifactorial condition that may be due to genetic, anatomic, endocrine, antiphospholipid antibody syndrome, immunologic, and environmental factors.

FOXD1 mutations play a central role in RPL. FOXD1 was defined as a major molecule involved in embryo implantation in mice and humans by regulating endometrial and placental genes. FOXD1 mutations in human species have been functionally linked to RPL's origin.

SIGNS AND SYMPTOMS

Most miscarriages occur before the 12th week of pregnancy. The signs and symptoms of a miscarriage are –

- Vaginal spotting or bleeding

- Pain or cramps in your abdomen
- Fluid passing from the vagina

DIAGNOSTIC EVALUATION

Pelvic Exam — Doctor will check if your cervix has begun to dilate.

Ultrasound — Ultrasound checks for a fetal heartbeat and determine if the embryo is developing typically. If a diagnosis cannot be made, another ultrasound can be done.

Blood Test — Your doctor may also check the level of pregnancy hormones in your blood and compare it to previous measurements. If there are any abnormal changes to hormone levels, this could indicate a problem.

Chromosomal Test — If you have had two or more miscarriages, the doctor may order blood tests for you and your partner to determine if your chromosomes are one of the factors.

Antibody Test — It is a test that is used to analyse a patient's sample for the presence or absence of a particular antibody or the amount of antibody that is present. They are a part of the body's immune system and are immunoglobulin proteins that protect people against invaders such as viruses, bacteria, chemicals, or toxins.

Thrombophilia Test — Thrombophilia is a condition where patients form blood clots. It can be dangerous if the blood clots obstruct blood flow and it can be an inheritance problem as well.

TREATMENT

Surgery — Surgery can fix problems in the uterus (womb) by putting extra tissues and rectifying the shape of the uterus in cases with a septum in the uterus, adhesions in the uterus, some uterine anomalies, etc. If the form of the inside part of the uterus is corrected, it can lower the chance of a miscarriage. The surgeon uses a unique tool with a camera (hysteroscope) to perform the surgery. This is a one-day procedure, and recovery time is a few days.

Blood-thinning medicines — Women with clotting problems can be treated with a low-dose of aspirin and heparin. These medicines are taken during pregnancy to lower the risk of miscarriage. Consult your doctor before using these medicines.

Genetic Screening — The parent's blood is studied to check if they have a translocation. If a chromosomal issue is found, the doctor would suggest genetic counselling. While many couples can conceive naturally, your doctor might suggest fertility treatments such as in-vitro fertilization (IVF).

IVF with PGS — PGS test determines whether the cells in an embryo contain the normal number of chromosomes which is 46. Once the embryo grows in the lab, it is biopsied on 5th day i.e., blastocyst age. Few embryo cells are sent to the lab which uses technology to count the number of chromosomes within each cell. PGS is a good option for those experiencing multiple miscarriages or may have different types of translocations.

Lifestyle Choices — Making healthy choices in your day-to-day life can improve the chances of a healthy pregnancy. A pregnant woman can also take psychological support to cope with the emotional pain of miscarriage.

COMPLICATIONS

- Bleeding and cramping lasting longer than 2 weeks
- Chills
- Fever (temperature over 100.4 F)
- Foul-smelling vaginal discharge.

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