

## Risk Factors of Recurrent Pregnancy Loss in Jalalabad Ragib Rabeya College Hospital, Sylhet

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### Abstract

Subfertility and unconstrained premature birth or unsuccessful labor is two types of conceptive disappointment. Subfertility influences about 10% to 15% of couples. Then again, the danger of fetus removal has been affirmed is about 15% to 20%. The differentiation among essential and auxiliary repetitive pregnancy loss can be made. Essential RPL is depicted as RPL without a past continuous pregnancy past 28 weeks' incubation, while auxiliary RPL is characterized as a scene of RPL after at least one past pregnancies advancing past 28 weeks' development. The main objective of this research is to find out the risk factors of recurrent pregnancy loss. The specific objectives are; to identify the origin of the pregnancy losses, to identify the probable therapeutic targets, and to provide recommendations regarding organization of care for couples faced with RPL. Total 60 samples were selected and the study duration was 3 years. After investigation, it was found that few factors, such as: age, psychological pressure, environmental and occupational exposure, chronic endometritis, smoking, genetic factors, and thrombophilia screening, uterine defects, were some of the risks of RPL. Multiple pregnancy loss can have a noteworthy mental cost for influenced couples, and numerous endeavors are being made to improve medicines and reduction the time expected to accomplish an effective pregnancy.

**Keywords:** RPL, Recurrent Miscarriage, Chronic Endometritis.

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## INTRODUCTION

Recurrent Pregnancy Loss (RPL) is characterized as at least three consecutive loss of pregnancy and this upsetting issue influences around 1% everything being equal. Subfertility and unconstrained premature birth or unsuccessful labor is two types of conceptive disappointment. Subfertility influences about 10% to 15% of couples. Then again, the danger of fetus removal has been affirmed is about 15% to 20%. About 0.5% to 5% of unconstrained premature births are repetitive miscarriage [1,2]. There is some discussion about the meaning of RPL, such as: two or three losses are adequate to characterize RPL. So in consistently practice assessment is normally started after the miscarriages of two or three pregnancies exceptionally in the event that they have gone before by infertility/subfertility treatment.

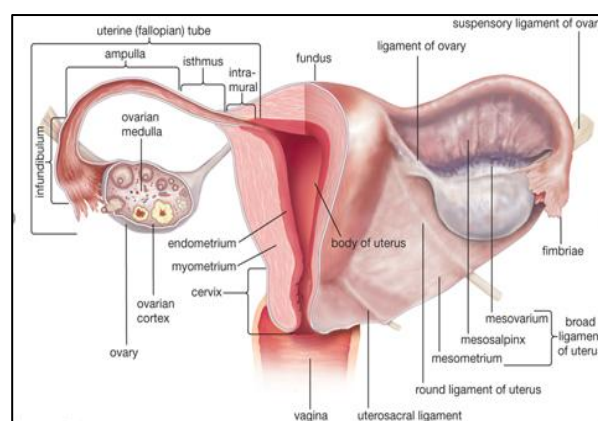


Fig-1: Uterus Anatomy

A pregnancy loss (miscarriage) is characterized as the unconstrained downfall of a pregnancy before the hatchling arrives at reasonability. The term along these lines incorporates all pregnancy loss (PLs) from the hour of origination until 28 weeks

of growth. It ought to be noticed that advances in neonatal consideration have brought about few infants enduring birth before 28 weeks of growth and various definitions apply in various nations [3].

The differentiation among essential and auxiliary repetitive pregnancy loss can be made. Essential RPL is depicted as RPL without a past continuous pregnancy past 28 weeks' incubation, while auxiliary RPL is characterized as a scene of RPL after at least one past pregnancies advancing past 28 weeks' development.

By definition, "recurrent" pregnancy loss is characterized as the loss of at least two pregnancies. Notwithstanding, to which degree this definition should be broadened or choked is less clear, as is appeared by changed definitions utilized in various rules and various nations.

## OBJECTIVE

### *Main Objective*

The main objective of this research is to find out the risk factors of recurrent pregnancy loss.

### *Specific Objective*

The specific objectives are

- To identify the origin of the pregnancy losses,
- To identify the probable therapeutic targets, and
- To provide recommendations regarding organization of care for couples faced with RPL.

## METHODS

Total 60 samples were selected from Jalalabad Ragib Rabeya College Hospital, Sylhet and the study duration was 3 years. Both primary and secondary data were collected. The key method was content analysis and observation.

### **Scope**

The overall point of this article is to supply medicinal services suppliers with the best accessible proof for examination and treatment of female with RPL. Recurrent Pregnancy Loss (RPL) is characterized as the loss of at least two pregnancies. It avoids ectopic pregnancy and molar pregnancy.

The article covers the consideration gave by optional and tertiary human services experts who have direct contact with, and settle on choices concerning the consideration of, couples with recurrent pregnancy loss or miscarriages.

This article is of pertinence to Bangladeshi clinicians and couples with RPL. In order to provide few instructions and shared-basic leadership, a patient adaptation of this article will be created.

## Risk Factors of RPL

### *Age*

Female age is a significant hazard factor for RPL; women that are more than 40 years have a higher danger of RPL, and have more regrettable anticipation contrasted with more youthful women. In couples determined to have RPL, the data that age is a hazard factor is as yet significant as it might influence the symptomatic systems, and the basic leadership of treatment or hopeful administration.

A relationship between cutting edge female age and RPL has been reliably appeared in a few investigations. In light of 2 partners (n=119+165), Cauchi and associates presumed that female age under 30 years related fundamentally with progress rate in ensuing pregnancy in women with RPL and that female age over 30 years is a hazard factor for pregnancy loss in women with RPL[4]. A expressive accomplice study evaluating the opportunity of live-birthcouples who had experienced RPL during a 5-year follow-up period, found a noteworthy lessening in the opportunity of live birth with expanding female age[5].

In an accomplice study exploring factors related with PL in 696 women with RPL, and a female age  $\geq 35$  years was found to twofold the danger of another PL, contrasted with women  $< 35$  years (OR 1.99; 95% CI 1.45-2.73)[6]. Our investigation inferred that female age (more than 35 years) was the main measurably huge indicator of the chromosomal peculiarity hazard in sporadic and RPL.

### *Psychological Pressure*

Maternal stress during pregnancy is potentially connected with an expanded danger of a few unfavorable pregnancy and birth results; however there are right now no excellent studies accessible. In our investigation, the effect of weight on the danger of premature delivery or repetitive pregnancy loss is hazy.

Nonetheless, we discovered two studies surveying stress in women with RPL. From a case-control study it was inferred that pressure is a hazard factor for RPL dependent on the finding of a fundamentally higher absolute score on the perceived pressure scale (PSS) among 45 women with unexplained RPL contrasted and 40 controls [7]. In another investigation, stress and depression were evaluated in 301 RPL patients and 1813 women without RPL attempting to consider. A high anxiety, characterized as  $\geq 19$  on the PSS scale, was increasingly pervasive in women with RPL (41.2%) when contrasted with controls (23.2%). Likewise, the chances of moderate to extreme depression were in excess of multiple times higher in women with RPL [8]. One little investigation (25 pregnancies) on pregnancy loss and stress during pregnancy indicated a relationship between maternal pressure and pregnancy loss, perhaps interceded through higher cortisol levels[9].

### ***Environmental and Occupational Exposure***

We found only two investigations assessing word related or natural presentation as hazard factor for RPL. In the main investigation serum zinc, copper, and nutrient E levels were essentially lower in 35 women with RPL and serum selenium, lead, and cadmium were fundamentally higher contrasted and 34 controls, which could demonstrate that substantial metals and an absence of micronutrients could cause pregnancy loss in women with RPL[10]. In the subsequent investigation, more significant levels of organochlorine pesticides were recognized in blood of 30 women with RPL contrasted with 30 controls, which could demonstrate a relationship between organochlorine pesticides and RPL[11]. Our studies give a comparable situation among a portion of the maternity patients of the medical clinic. In any case, it was a test to recognize the accurate natural or potentially word related state of said patients.

In view of just a couple of small investigations, introduction to word related and natural components (substantial metals, pesticide, and absence of micronutrients) is by all accounts related with an expanded danger of pregnancy loss in women with RPL. In spite of the fact that introduction to conceivable dangerous substances ought to be abstained from during pregnancy (for every single pregnant woman), there are lacking information to prescribe insurance against a specific word related or ecological factor in women with RPL.

### ***Chronic Endometritis***

Chronic Endometritis is characterized as ceaseless irritation of the endometrial covering, and a few studies have demonstrated an expanded commonness in women with RPL (10%–27%)[12-14]. Endometrial receptivity is believed to be impeded by the stromal invasion of plasma cells, just as modified articulations of qualities engaged with implantation, prompting RPL yet in addition subfertility and repetitive implantation disappointment following in vitro preparation (IVF)[14]. Several strategies have been utilized to affirm the analysis of chronic endometritis, yet the best quality level is proven due to the plasma cells found in the endometrial stroma, utilizing immunohistochemistry stains for syndecan-1 (CD138), a marker of plasma cells. There are no studies contrasting paces of endometritis in women and RPL to control women, or talking about the prescient estimation of a positive test for chronic endometritis.

In any case, we found that anti-infection agents can expel the endometritis with an evident improvement in live birth rate. In any case, this idea has not been tried in randomized controlled preliminaries.

### ***Smoking***

Smoking is unequivocally connected with antagonistic obstetric and neonatal results, including

ectopic pregnancy, stillbirth, placenta praevia, preterm birth, low birth weight, and intrinsic irregularities. Studies have additionally detailed relationship between maternal smoking during pregnancy and issues during youth, including unexpected baby passing disorder, weight, psychosocial issues and malignancies[15]. Smoking discontinuance is in this manner prescribed to every pregnant woman.

In any case, we found the effect of smoking or smoking suspension on pregnancy loss in women with RPL is less clear. In a review study, contrasting way of life conduct in 326 women and RPL and 400 controls who had in any event one live birth, natural introduction to tobacco smoke (detached smoking) essentially expanded the danger of RPL contrasted and without tobacco controls. The hazard expanded with the everyday length of presentation (balanced OR 2.30; 95% CI 1.50-3.52 for short introduction of <1h/day; balanced OR 4.75; 95% CI 3.23-6.99 for long introduction of  $\geq 1$  h/day). Different studies have assessed the impact of maternal smoking on the danger of sporadic pregnancy loss. We found that the effect of male smoking was increasingly critical in substantial smokers contrasted with moderate smokers.

### ***Genetic Factors***

Genetic or hereditary variations from the norm of the conceptus are a perceived reason for sporadic and repetitive pregnancy loss (RPL). In a precise survey, the commonness of chromosome anomalies in a solitary sporadic unnatural birth cycle was 45% (95% CI 38-52; 13 investigations ;). The commonness of chromosome irregularities in an ensuing unsuccessful labor subsequent to going before RPL was practically identical, i.e. prevalence 39%; 95% CI 29-50; 6 investigations)[16]. It is conceivable to find out whether an early pregnancy loss is because of a hereditarily irregular undeveloped organism or embryo by dissecting the pregnancy or fetal tissue [17], our investigation additionally saw it as same.

In our examination, deciding the chromosomal status of pregnancy tissue from women with recurrent pregnancy loss furnished them with a reason or purpose behind the specific loss being researched, yet it didn't really preclude other hidden conditions. No unmistakable impact of hereditary testing of the pregnancy tissue on forecast has been portrayed up until this point and the job of hereditary examination of pregnancy tissue ought to be additionally expounded inside a prognostic model.

### ***Thrombophilia Screening***

A few hereditary causes inclining patients to venous thromboembolism (VTE) have been distinguished and are as of now tried among patients giving a thromboembolic occasion, or their relatives. Indeed, even in the setting of venous thromboembolism, the benefit of testing and treatment is disputable.<sup>18</sup> Our

examination likewise finishes up comparable realities as Genetic thrombophilia factors have been assessed in women with RPL, as they are ventured to be a causing component of RPL, and could be related with serious obstetric intricacies. This incorporates Factor V Leiden transformation, Prothrombin change, and Protein C, Protein S and Antithrombin lack.

Concentrates on the Factor V Leiden change and RPL were condensed and examined for investigative legitimacy, clinical legitimacy and clinical utility<sup>19</sup>. Bearers of the Factor V Leiden change were bound to have a resulting loss when contrasted with non-transporters (OR 2.03; 95% CI 1.29-3.17)[19].

### Uterine Defects

We saw the uterine imperfections as significant reason for RPL. Uterine inconsistencies are allegedly found in up to 19% of women with RPL and can be named obtained or innate [20].

Gained irregularities incorporate intrauterine attachments, myomas, and endometrial polyps. Intrauterine attachments, or synechiae, happen locally, where the endometrial basal layer has been devastated, most much of the time following curettage, a uterine medical procedure or disease, or an entangled birth [21]. The recurrence and seriousness of bonds increment with the quantity of curettages [21]. Submucosal myomas are apparently found in 4.5% of women with RPL and ought to be precisely evacuated at whatever point diagnosed [22]. Polyps are found in 2%–3% of women with RPL and ought to be hysteroscopically resected [23]. Cervical Incompetence usually causes second trimester loss, and it tends to be obtained following careful injury or is related with innate uterine abnormalities [22].

### CONCLUSION AND RECOMMENDATION

The long haul anticipation of couples with repetitive pregnancy loss is great, and most in the end accomplish a sound live birth. Be that as it may, various pregnancy loss can have a noteworthy mental cost for influenced couples, and numerous endeavors are being made to improve medicines and reduction the time expected to accomplish an effective pregnancy. In this way, it is suggested that;

- Women ought to be delicately educated that the hazard regarding pregnancy loss is most minimal in women matured 20 to 35 years. Also, women ought to be delicately educated that the hazard regarding pregnancy loss quickly increments after the age of 40.
- Stress is related with RPL, however couples ought to be educated that there is no proof that pressure is an immediate reason for pregnancy loss.
- Couples with RPL ought to be educated that smoking could negatively affect their odds of a live birth, and consequently end of smoking is suggested.

- Restorative and family ancestry could be utilized to tailor analytic studies in RPL.
- Hereditary examination of pregnancy tissue isn't routinely prescribed yet it could be performed for illustrative purposes.

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