

# Evaluation of Risk Factors of Recurrent Pregnancy Loss in Kashmiri Women

Shivindu Charak<sup>1</sup>, Samina Sultana<sup>2</sup>, Beenish Yousuf<sup>2</sup>

<sup>1</sup>Post Graduate, Department of Obstetrics and Gynecology, Government Medical College, Srinagar, Jammu and Kashmir, India, <sup>2</sup>Associate Professor, Government Medical College, Srinagar, Jammu and Kashmir, India

## Abstract

Recurrent pregnancy loss (RPL) is defined as three or more consecutive, spontaneous pregnancy losses under 20-week gestation. Age of the mother, genetics, uterine abnormalities, hormonal disorders, metabolic disorders, lifestyle, sperm quality, immunological factors, environmental factors, previous pregnancy loss, etc., are commonly associated with RPL. The present observational study was conducted in the Department of Obstetrics and Gynaecology in GMC Srinagar Lall Ded Hospital with the aim to evaluate the risk factors of RPL among Kashmiri women. A total of 50 pregnant Kashmiri women were screened. It was an observational study. There was no conflict of interest. It was observed that the majority of the study subjects were in the age group of 26–30 years (46%), most of the subjects had three abortions (42%), majority of the study subjects had secondary education (32%), and most of the subjects were from urban area (56%). The most common cause of RPL was endocrinal problems (28%), followed by immunological problems (22%), anatomical factors (18%), unknown causes (12%), chromosomal defects (8%), and 4% subjects had other causes. The study concluded that the RPL is a common health issue among women in child-bearing age. In study subjects who had immunological problems, the most common involved factor was APLA (72.72%).

**Key words:** Abortion, Miscarriage, Pregnancy loss, Pregnancy problems and risk factors

## INTRODUCTION

Among women of child-bearing age, the pregnancy loss and miscarriage are common problems. Three or more consecutive spontaneously failed pregnancies before 20 weeks of gestation are characterized by recurrent pregnancy loss (RPL).<sup>[1]</sup> The secondary RPL is an incident of pregnancy loss following one or more prior pregnancies advancing beyond 24 weeks of gestation and primary RPL is defined as the pregnancy loss without a prior pregnancy beyond 24 weeks of gestation.<sup>[2]</sup>

It is estimated that approximately 15–25% of pregnancies had RPL. The available data showed that various factors are related to RPL such as age of the mother, genetics, uterine abnormalities, hormonal disorders, metabolic

disorders, lifestyle, sperm quality, immunological factors, environmental factors, and previous pregnancy loss.<sup>[3]</sup>

The RPL and its causes or associated factors should be investigated to provide better treatment and to achieve a successful pregnancy.

Thus, the present study was conducted to evaluate the risk factors of RPL among Kashmiri women.

## MATERIALS AND METHODS

The present observational study was conducted in the Department of Obstetrics and Gynaecology in GMC SRINAGAR over a period of 6 months (July 2022–December 2022) after taking the permission from the concerned authority.

A total of 50 pregnant Kashmiri women were involved in the study after obtaining the informed consent from them.

### Inclusion Criteria

1. Age >18 years
2. Pregnant women with a history of 2 or more spontaneous abortions.

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**Corresponding Author:** Dr. Shivindu Charak, Department of Obstetrics and Gynecology, Government Medical College, Tulsibagh Srinagar, Jammu and Kashmir, India

### Exclusion Criteria

1. Pregnant women with a history of one spontaneous abortion
2. Pregnant women with a history of induced abortions.

A detailed history was collected, and all the study subjects were examined. Demographic variables were analyzed and all the patients were screened for the involved risk factors.

Data were recorded in Microsoft Excel sheet and analyzed with SPSS version 20.0.

## OBSERVATIONS AND RESULTS

Table 1 depicts that the majority of the study subjects were in the age group of 26–30 years (46%), followed by 31–35 years (28%), 21–25 years (18%), >35 years (6%), and ≤20 years (2%).

It was reported that the majority of the subjects had three abortions (42%), followed by subjects with two abortions (32%), subjects with four abortions (14%), and subjects with five abortions (12%) as shown in Table 2.

In our study, the most of the study subjects had secondary education (32%), followed by subjects with higher education (28%), subjects with primary education (16%), and 16% subjects were illiterate as presented in Table 3.

In our study, the majority of subjects were from urban area (56%) as shown in Table 4.

In Table 5, it is depicted that the majority of the subjects had primary RPL (68%) and 32% had secondary RPL.

It was found that most (62%) of the study subjects were in the first trimester of pregnancy and 38% subjects were in secondary trimester of pregnancy [Table 6].

Table 7 depicts that the most common cause of RPL was endocrinal problems (28%), followed by immunological problems (22%), anatomical factors (18%), unknown causes (12%), chromosomal defects (8%), and 4% subjects had other causes.

Table 8 shows that, in subjects with first trimester of pregnancy, the most common cause of RPL was endocrinal problems (35.48%), followed by immunological problems (29.03%), unknown cause (12.9%), anatomical factors (9.67%), and chromosomal abnormalities and infection (6.45%), respectively, whereas, in subjects with second trimester of pregnancy, the most common cause of RPL was anatomical factors (31.57%), followed by endocrinal problems (15.78%), chromosomal abnormalities,

**Table 1: Age distribution**

Age wise distribution	Number	%
≤20 year	1	2
21–25 year	9	18
26–30 year	23	46
31–35 year	14	28
>35 year	3	6

**Table 2: Distribution as per number of abortions**

Number of abortions	Number	%
A2	16	32
A3	21	42
A4	7	14
≥A5	6	12

**Table 3: Educational status**

Education	Number	%
Illiterate	8	16
Primary	12	24
Secondary	16	32
Higher	14	28

**Table 4: Residence**

Area/Locality	Number	%
Urban	28	56
Rural	22	44

**Table 5: Type of recurrent pregnancy loss**

Types of RPL	Number	%
Primary	34	68
Secondary	16	32

RPL: Recurrent pregnancy loss

**Table 6: Trimester**

Trimester	Number	%
First trimester	31	62
Second trimester	19	38

**Table 7: Causes of recurrent pregnancy loss**

Etiology of RPL	Number	%
Anatomical factors	09	18
Endocrine	14	28
Chromosomal	04	8
Immunological	11	22
Infectious	04	08
Unknown cause	06	12
Others	02	04

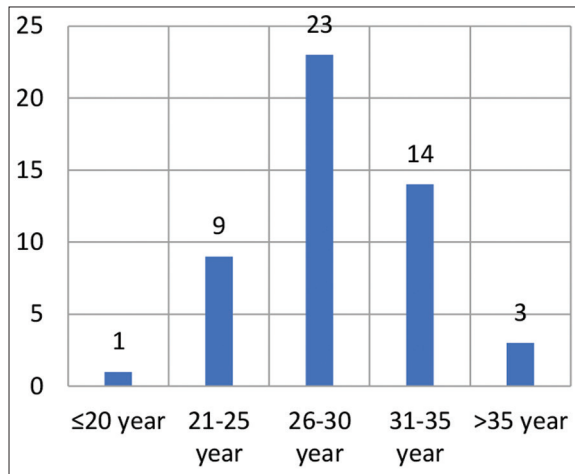
RPL: Recurrent pregnancy loss

**Table 8: Causes of recurrent pregnancy loss in first and second trimester**

Etiology of first trimester (n=31)	Number	%
Anatomical factors	03	9.67
Endocrine	11	35.48
Chromosomal	02	6.45
Immunological	09	29.03
Infectious	02	6.45
Unknown cause	04	12.9
Etiology of second trimester (n=19)	Number	%
Anatomical factors	06	31.57
Endocrine	03	15.78
Chromosomal	02	10.52
Immunological	02	10.52
Infectious	02	10.52
Unknown cause	02	10.52
Others	02	10.52

**Table 9: Immunological factors**

Etiology	Number	%
APLA	8	72.72
SLE	1	9.09
Grave's disease	1	9.09
Rheumatoid arthritis	1	9.09



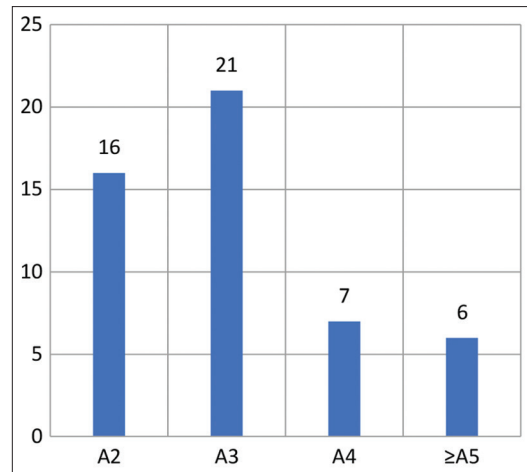
**Figure 2: Age distribution**

immunological problems, infection, unknown causes, and others (10.52% each, respectively).

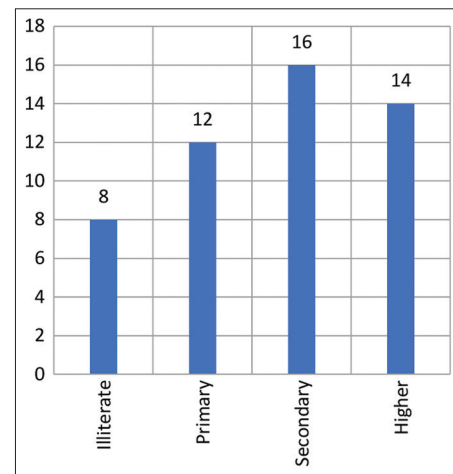
It was observed that, among the study subjects who had immunological problems, the most common involved factor was APLA (72.72%), followed by SLE, Grave's disease [Figure 1], and rheumatoid arthritis (9.09% each, respectively) [Table 9].

## DISCUSSION

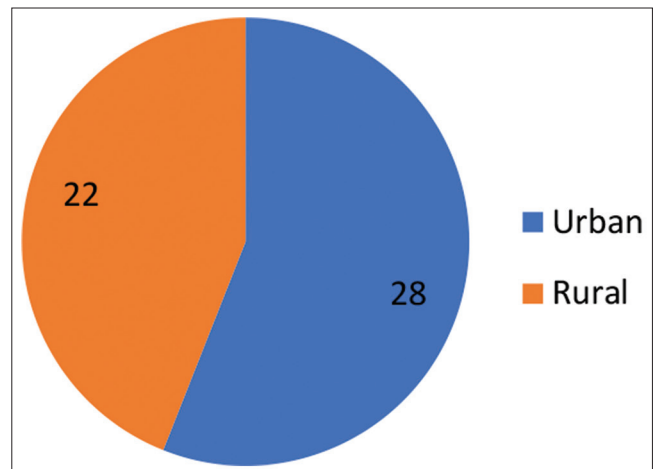
In the present study, a total of 50 pregnant Kashmiri [Figure 2] women were evaluated for the associated risk factors



**Figure 1: Distribution as per number of abortions**



**Figure 3: Educational status**



**Figure 4: Residence**

involved in RPL. The data were analyzed and discussed with previously available literature [Figures 3 and 4].

In our study that the majority of the study subjects were in the age group of 26–30 years (46%), most of the subjects

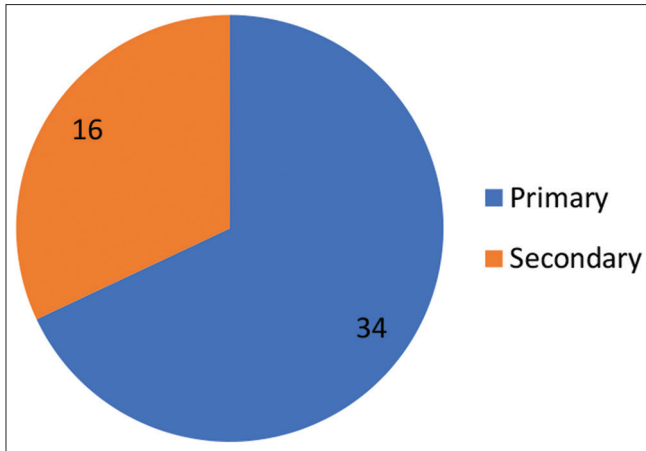


Figure 5: Type of recurrent pregnancy loss

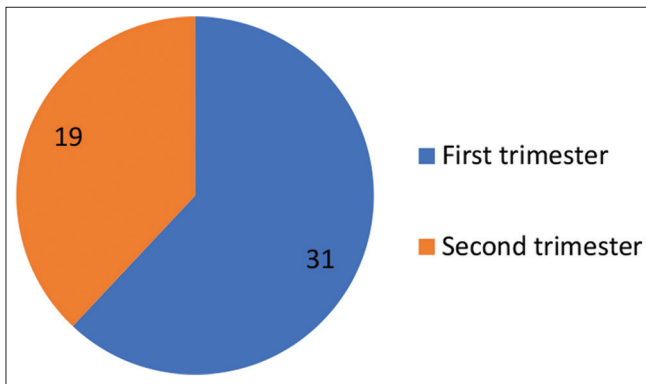


Figure 6: Trimester

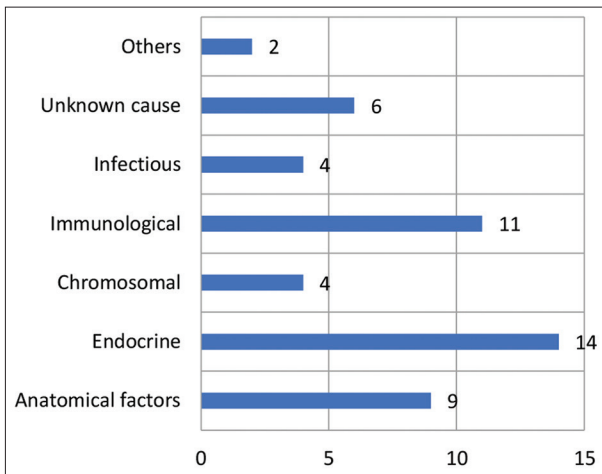


Figure 7: Causes of recurrent pregnancy loss

had three abortions (42%), majority of the study subjects had secondary education (32%), and most of subjects were from urban area (56%). These findings are consistent with the study conducted by Chester *et al.* (2022) reported that most of the patients were in the advanced age.<sup>[4]</sup> According to ACOG, it was reported that most of the patients were in advanced age. Similar study conducted by Singh *et al.* (2017) observed that the majority of the study subjects

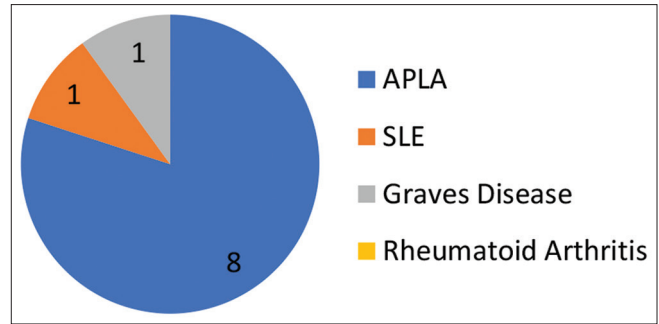


Figure 8: Immunological factors

were in the age groups of 26–30 years, most of the subjects had G4 gravida (37%), majority of the study subjects had higher education (57%), and most of subjects were from urban area (63%).<sup>[5,6]</sup>

The current study found that the majority of the subjects [Figure 5] had primary RPL (68%) and 32% had secondary RPL, whereas most (62%) of the study subjects were in [Figure 6] the first trimester of pregnancy and 38% subjects were in the secondary trimester of pregnancy. These results are comparable with the studies conducted by Jaslow *et al.*, Jivraj *et al.*, and Li *et al.*, found that the most of the study subjects had primary RPL.<sup>[7-9]</sup>

It was observed that, among all the subjects, the most common cause of RPL was endocrinal problems (28%), followed by immunological problems (22%), anatomical factors (18%), unknown causes (12%), chromosomal defects (8%), and 4% subjects had other causes [Figure 7]. Moreover, among the study subjects who had immunological problems, the most common involved factor was APLA (72.72%), followed by SLE, Grave’s disease, and rheumatoid arthritis (9.09% each, respectively) [Figure 8]. The findings are correlated with the study conducted by Jaslow *et al.* found that among majority of the subjects had endocrine problems.<sup>[7]</sup> Another study conducted by Noble reported that most of the patients had APLA factors for RPL.<sup>[10]</sup>

## CONCLUSION

The present observational study concluded that RPL is a common health issue in women (child-bearing age). In our study, the most common cause of RPL was endocrinal problems.

## REFERENCES

1. Practice Committee of the American Society for Reproductive Medicine. Definitions of infertility and recurrent pregnancy loss: A committee opinion. *Fertil Steril* 2013;99:63.
2. Sultana S, Nallari P, Ananthapur V. Recurrent Pregnancy Loss (RPL): An

- overview. *J Womens Health Dev* 2020;3:302-15.
3. American Society for Reproductive Medicine. The Practice Committee of the American Society for Reproductive Medicine. Evaluation and Treatment of Recurrent Pregnancy Loss: A Committee Opinion. Birmingham, Alabama: American Society for Reproductive Medicine; 2012.
  4. Chester MR, Tirlapur A, Jayaprakasan K. Current management of recurrent pregnancy loss. *Obstet Gynaecol* 2022;24:260-71.
  5. Women and Infants. Recurrent Miscarriage and Pregnancy Loss. Available from: <https://fertility.womenandinfants.org/services/women/recurrent-miscarriage>
  6. Singh A, Kujur A, Rathore K. An evaluation of recurrent pregnancy loss. *Int J Reprod Contracept Obstet Gynecol* 2017;6:1332-5.
  7. Jaslow CR, Carney JL, Kutteh WH. Diagnostic factors identified in 102 women with two versus three or more recurrent pregnancy losses. *Fertil Steril* 2010;93:1234-43.
  8. Jivraj S, Anstie B, Cheong YC, Fairlie FM, Laird SM, Li TC. Obstetric and neonatal outcome in women with a history of recurrent miscarriage: A cohort study. *Hum Reprod* 2001;16:102-6.
  9. Li TC, Makris M, Tomsu M, Tuckerman E, Laird S. Recurrent miscarriage: Aetiology, management and prognosis. *Hum Reprod Update* 2002;8:463-81.
  10. Noble LS. Antiphospholipid antibodies associated with recurrent pregnancy loss: Prospective, multicenter, controlled pilot study comparing treatment with low-molecular-weight heparin versus unfractionated heparin. *Fertil Steril* 2005;83:684-90.

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