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Original Research Article

An evaluation of recurrent pregnancy loss

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ABSTRACT

Background: This study was aimed to know the demographic profile and categorizes the causes of RPL.
Methods: This observational study was carried out in the department of obstetrics and gynecology, Pt. J.N.M. Medical College Raipur from Nov 2015-Sept 2016. Total 100 women were evaluated with history of RPL.
Results: 100 women were recruited in our study. The incidence of primary RPL was more than secondary RPL. 48 % women had first trimester abortions. The identifiable causes accounted for 53% out of which anatomical defects were the commonest .Next were endocrinal factors (20%), and Genetic factors (1%),Immunological factors 7%., Medical causes were 3%. However, 47% were unexplained.
Conclusions: Despite innumerable investigations, sometimes or rather most of the times, the etiology remains obscure. It is this group of women who become a challenge to manage. Ultimately, most effective therapy for women with unexplained RPL is antenatal counseling, psychological support and tender loving care.

Keywords: Anatomical factors, Endocrinal factors, Re-current pregnancy loss

INTRODUCTION

Recurrent pregnancy loss remains an enigma as the underlying cause mostly eludes the clinician, making the diagnosis & the treatment extremely difficult. It occurs in 1-2% of fertile women.[1] According to the Royal College of Obstetrics and Gynaecology (RCOG), a miscarriage can be defined as spontaneous loss of a pregnancy before gestational age of 20 wks and RPL is defined as three or more consecutive miscarriages.[2] The American Society for Reproductive Medicine (ASRM) (2012) defines recurrent pregnancy loss as two or more failed pregnancy which have been documented by either ultrasound or histopathological examination.

The risk of miscarriage is higher in the earlier gestation, majority occurring in first trimester. The risk of miscarriages in subsequent pregnancies is 30% after 2 losses, compared with 33% after 3 losses among patients without a history of a live birth. This strongly suggests a role for evaluation after just 2 losses in patients with no prior live birth.

Various etiologies, either alone or in combination, have been proposed to contribute to pregnancy loss. These include parental chromosomal abnormalities, uterine anomalies, endocrinal disorders, thrombophilia, antiphospholipid antibody syndrome, immunological factor and environmental factors. Approximately 2%-4% of RPL is associated with parental chromosomal abnormalities, most commonly balanced reciprocal or Robertsonian translocations. Anatomical causes contribute to 10% -15% cases of RPL. Others causes like Endocrinal disorders contribute to 17-20%, Antiphospholipid antibody syndrome to 15%-20% of RPL. Even after evaluation of these causes, more than 33% cases will still remain unexplained. The present study makes an attempt to find out the demographic profile of women and categorize the major causes of RPL.

Aims and objectives

This study was conducted to find out the demographic profile of women with recurrent Pregnancy loss and categorize the major causes.

METHODS

This was a prospective observational study conducted in Department of Obstetrics and Gynecology at Pt. J.N.M. Medical College, Raipur, India, in women with history of recurrent pregnancy loss attending OPD and IPD, from November 2014 to September 2016.

Inclusion criteria

Women with history of 2 or more spontaneous abortions.

Exclusion criteria

- Women with history of only one spontaneous abortion.
- Women with history of two or more induced abortions.

A detailed clinical history, thorough clinical examination and investigations according to history with a certain group of pre-decided laboratory test, were done through a pee-structured proforma.
Following investigations were done according to history and requirement:

- Blood sugar, HBA_1C
- Hormonal profile- T3, T4, TSH, Progesterone, LH, FSH, estradiol, Prolactin
- APLA antibodies
- Karyotyping
- Ultrasound pelvis and hysterosalpingography

RESULTS

In our study, nearly 67% women belonged to age between 20 to 30 years (Table 1).

The mean age in present study, was 25.2 yrs, with Only 9 patients being >35 yrs of age. 37% cases were gravida 4, whereas 33 % cases were gravida 3. About 57 % women had higher education and 63% women belonged to urban population and 37% rural.

We found that the incidence of primary RPL was 75%. According to patient's history, 48% women had abortions in the first trimester. It showed that this was the most perilous period for women with RPL.

We found that most women with first trimester abortions remained unexplained. Among identifiable causes, Endocrinal factors were the most common cause, (18.75%). Next were anatomical cause (14.58), followed by the Immunological factors (6.25%) (Table 3). In 33% of second trimester abortions, anatomical factors were the most common cause (36.37%) followed by Endocrinal factors (30.3 %).

Table 1: Socio demographic profile (n=100).

Age wise distribution	% of cases (N=100)
<20yr	3%
21-25 yr	29%
26-30 yr	38%
31-35 yr	21%
>35	9%
Parity wise distribution	
G2	13%
G3	33%
G4	37%
G5	12%
>G5	5 %
As per education	
Illiterate	8%
Primary	5%
Secondary	30%
Higher	57%
Urban / Rural	
Urban	63%
Rural	37%

Figure 2: Distribution of cases as per types of RPL and trimester (n=100).

Types wise distribution	Percentage of cases
Primary	75%
Secondary	22%
Tertiary	3%
Trimester wise distribution	percentage of cases
First trimester	48%
Second trimester	33%
Both trimester	19%

Figure 3: Etiology of first and second trimester.

Etiology of first trimester (n=48)	Percentage of cases
Genetic	2.08%
Endocrinal	18.75%
Anatomical	14.58%
Immunological	6.25%
Infection	2.08%
Unexplained	56.25%
Etiology of second trimester (n=33)	**Percentage of cases**
Anatomical factors	36.37%
Medical causes	9.1%
Endocrinal	30.3%
Unexplained	21.21%
Immunological	3.03%

Table 4: Different cause of RPL (n=100).

Etiology of RPL	Percentage of cases
Anatomical	21%
Endocrinal	20%
Genetic	1%
Immunologic	7%
Infection	1%
Medical	3%
Unexplained	47%

Table 5: Immunological factors (n=100).

Etiology	Percentage of cases
Normal	93%
APLA +	5%
SLE	2%

The identifiable causes accounted for 53% cases (Table 4), out of which anatomical defects were the commonest. Next were endocrinal factors (20%), and Genetic factors (1%) which presented as first trimester abortions and history of Down's syndrome. Immunological factors accounted for 7% (Table 4). APLA was positive in 5% (Table 5). They presented as late first trimester abortion and late second trimester abortion, also had features of early onset pregnancy induced hypertension. Systemic lupus erythematosus accounted for 2% (Table 5). However, 47% were unexplained.

3% women had medical causes (Table 4) and presented with history of chronic hypertension in second trimester abortion.

DISCUSSION

Recurrent pregnancy loss is not only distressing for the women, but frustrating for the clinician. We found that 67% women belonged to age between 20 to 30 years. The mean age in our study, was 25.2 yrs. whereas Bhattacharya et al, reported the mean age as 27.5 yrs.[3]

In our study, we found that the incidence of primary RPL was 75%, consistent with study by also reported higher rates of primary RPL.[4-6] We found only one study which reported secondary RPL to be more common.[7]

Majority of 53% women showed identifiable causes. Among which endocrinal factors accounted for 20% in contrast to study.[8-10] reported 6.9%, 6% and 10% c, respectively. In another study, endocrine pathology was found in 13.5%.[4]

Anatomical factors were very common in our study. Uterine anomalies remain one of the most common abnormalities found among patient with RPL and the detrimental effects of uterine anomalies on pregnancy are well documented. Studies have urged that uterine imaging be recommended for patients with only two consecutive miscarriages because there is no difference in the rate of anomalies between women with two and those with three or more losses.

We found that APLA was positive in 5%. In another study it was found that 16% of women of RPL were APLA positive. Primary antiphospholipid syndrome, thrombo-embolism, thrombocyto-penia and APLA is now increasingly recognized as being an important cause of RPL.[12] The majority of patients with APLA had experienced only early miscarriages and this emphasizes the screening of all women for the presence of these antibodies, irrespective of the gestation of their pregnancy loss. The fetal loss rate in women with APLA is as high as 80%.

Infective causes were also seen in studies by other authors. In a recent study, they did not find infections as a cause of RPL.

According to history, karyotyping was required in 48% women. Counseling was done in all. Only 30% underwent karyotyping. Fortunately all reported normal. In a majority of women, RPL remained unexplained. It is in these women, that counseling must be done keeping her age, parity and previous obstetrics history in mind.

CONCLUSION

Genetic abnormalities, immunological factors, anatomic defects, endocrinal factors, certain thrombophilias and infections are established causes of RPL and specific treatment improves pregnancy outcome.

Women with unexplained pregnancy loss represented a heterogeneous group of patients and accounting for 47% of the cases in our study. Women with unexplained RPL should be encouraged to continue attempts at pregnancy, because prospective studies show that these women, even with advanced maternal age, have a high rate of live births with their subsequent pregnancies.

Despite innumerable investigations, sometimes or rather most of the times, the etiology remains obscure. It is this group of women who become a challenge to manage. Ultimately, most effective therapy for women with unexplained RPL is antenatal counselling, psychological support and tender loving care.

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