IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 20, Issue 4 Ser.8 (April. 2021), PP 21-26
www.iosrjournals.org

Study on Epidemiology and Etiology of Recurrent Pregnancy Loss and Fetal Outcome in a Tertiary Care Center

Dr. V.G.Poorani *M.S OG Assistant Professor*
Dr. M.Ilanjselvi *M.S OG Assistant Professor*
Dr. V.Arulmozhli *M.S OG Assistant Professor*

Abstract:
BACKGROUND*:*
Recurrent pregnancy loss is defined as two or more consecutive pregnancy losses prior to 20 weeks of gestation. It affects 2 to 5% of the couples. Primary RPL refers to multiple losses in a women with no previous viable infants whereas secondary RPL refers to multiple losses in a woman who has already had a pregnancy beyond 20 weeks of gestational age. Most pregnancy losses result from chromosomal and genetic abnormalities and are random events. The abnormality may come from the egg, sperm or the embryo and it is estimated that about 12 to 15% of the clinically recognised pregnancies end up in miscarriage. Hence early diagnosis and treatment is essential for successful pregnancy outcome.
STUDY DESIGN*: Cross sectional study*
PERIOD OF STUDY: *1 year*
METHODOLOGY: *This study was conducted in Govt.RSRM Lying in Hospital, Chennai during the period of October 2017 – October 2018 after getting approval from the Institutional Ethical Committee. 100 pregnant women with history of recurrent pregnancy losses are included in the study. Detailed history of previous pregnancy outcomes, physical examination , blood and radiological investigations along with karyotyping is done after obtaining consent from the patients and frequent periodical antenatal follow up of present pregnancy is carried out to monitor fetal outcome.*
RESULTS: *In the present study conducted in 100 cases of recurrent pregnancy loss patients in Government RSRM Lying in Hospital, Chennai, the mean age of the study population was 25.34 years, primary RPL was found in 81% and secondary RPL in 19% of patients. Almost 51% of the patients had 2 consecutive abortions, followed by three ,four, five and six consecutive abortions in 13%,3%,1% respectively. The cause was unexplained in 53% of patients followed by hormonal in 23%, anatomical in 6%, immunological in 3%,infective in 2% and genetic cause in 1%.76% of the patients had first trimester abortions and the 24% had second trimester abortions. Overall successful outcome was found in 91% of the patients with term deliveries in 75%, preterm deliveries in 16% and abortions in 9% 66% were delivered by LSCS and the remaining had vaginal deliveries.*

Date of Submission: 14-04-2021 Date of Acceptance: 28-04-2021

I. Introduction

Spontaneous pregnancy loss is a shockingly and surprisingly common occurrence. Approximately 15% of clinically recognized pregnancies result in spontaneous loss, there are many more pregnancies that fail prior to being clinically recognized. Only 30% of all conceptions result in a live birth. Spontaneous pregnancy loss can be physically and emotionally a burn for couples, especially with recurrent losses. The incidence of pregnancy loss is generally between 12–15%. However, unrecognised pregnancy loss is considered to be much greater – there is suggestion that 15% of fertilised ova are lost before implantation, with an overall conception loss rate of up to 52%. Maternal age and number of previous miscarriages independently predict future miscarriage. One per cent of couples will experience three or more losses; 5% will experience two or more losses. Based on the incidence of sporadic pregnancy loss, the incidence of recurrent pregnancy loss should be approximately 1 in 300 pregnancies. However, epidemiologic studies have revealed that 1% to 2% of women experience recurrent pregnancy loss. According to the Practice committee of American Society for Reproductive Medicine 2008 RPL is defined as recurrent pregnancy loss of two or more failed pregnancies. Hence a diagnosis of Recurrent Pregnancy Loss (RPL) could be considered after the loss of two or more pregnancies.

II. Aims And Objective

To analyse the prevalence, etiology and perinatal outcome in patients with recurrent pregnancy loss in Govt RSRM Lying in Hospital, for a duration of one year.

III. Methodology:

This study was conducted in Govt.RSRM Lying in Hospital, Chennai during the period of October 2017 – October 2018 after getting approval from the Institutional Ethical Committee. 100 pregnant women with history of recurrent pregnancy losses are included in the study. Detailed history of previous pregnancy outcomes, physical examination, blood and radiological investigations along with karyotyping is done after obtaining consent from the patients and frequent periodical antenatal follow up of present pregnancy is carried out to monitor fetal outcome.

INCLUSION CRITERIA:

All pregnant women with history of recurrent pregnancy losses both primary and secondary,
*prior to 20 weeks of gestation
*singleton pregnancies

EXCLUSION CRITERIA:

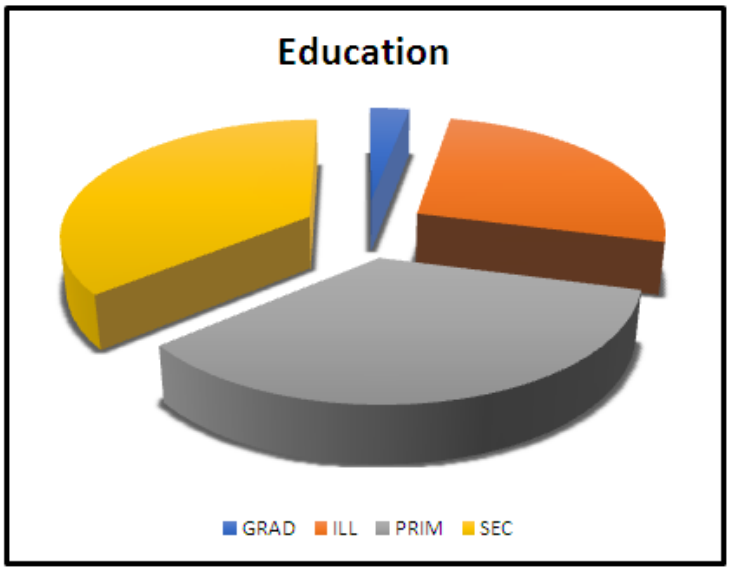
Patient with previous history of
*diabetes mellitus,
*cardiac disease,
*bleeding tendencies,
*ectopic pregnancy
*multiple gestation.

IV. Results

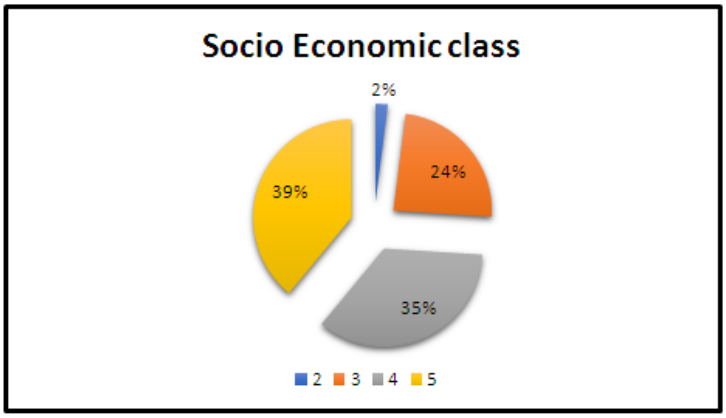
TABLE 3: AGE DISTRIBUTION OF THE STUDY GROUP

AGE GROUP IN YEARS		Frequency	Percent
	18 - 20 yrs	8	8.0
	21 - 25 yrs	48	48.0
	26 - 30 yrs	38	38.0
	31 - 35 yrs	5	5.0
	Above 35 yrs	1	1.0
	Total	100	100.0

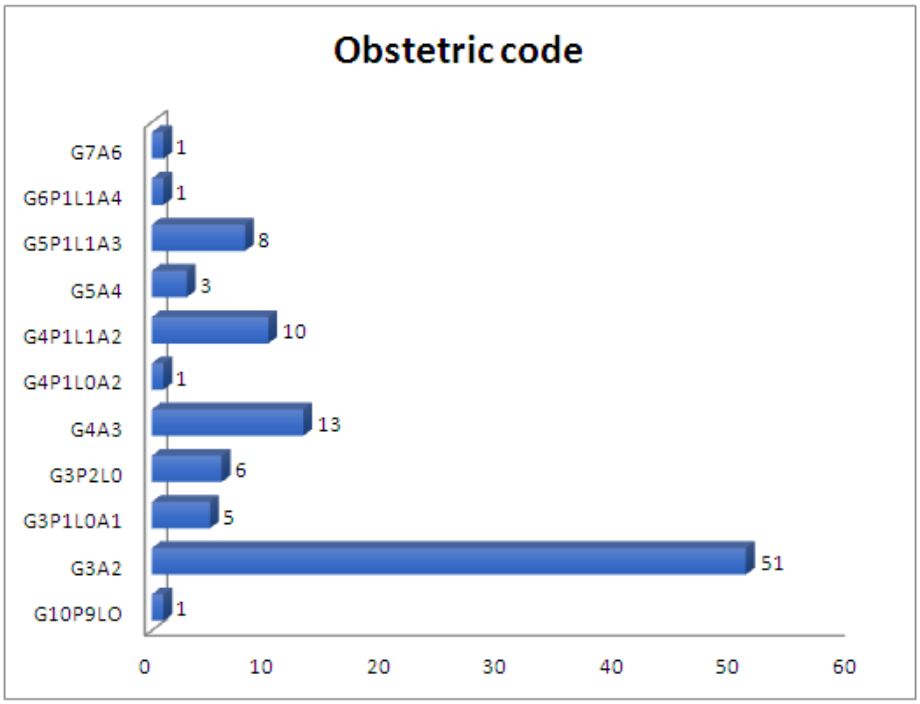
EDUCATIONAL DISTRIBUTION OF THE GROUP:



SOCIOECONOMIC STATUS OF THE GROUP:



OBSTETRIC CODE OF THE STUDY POPULATION

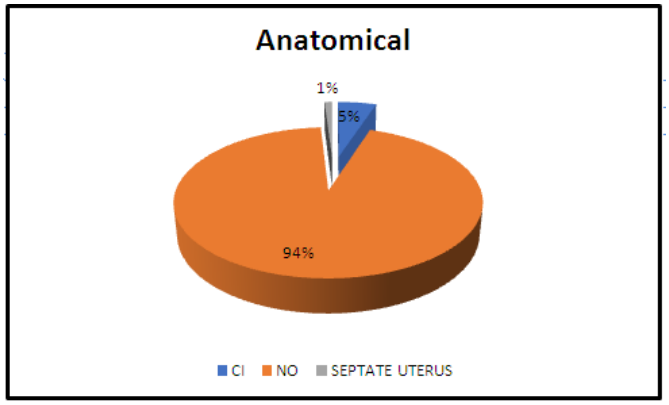


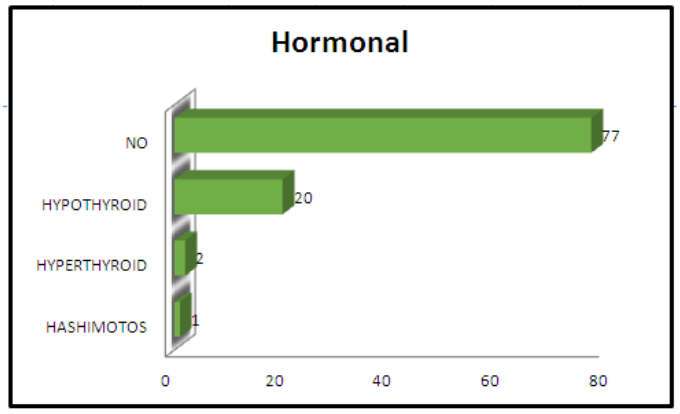
GENETIC ETIOLOGY

GENETIC			
		Frequency	**Percent**
	AR	1	1.0
	NO	99	99.0
	Total	100	100.0

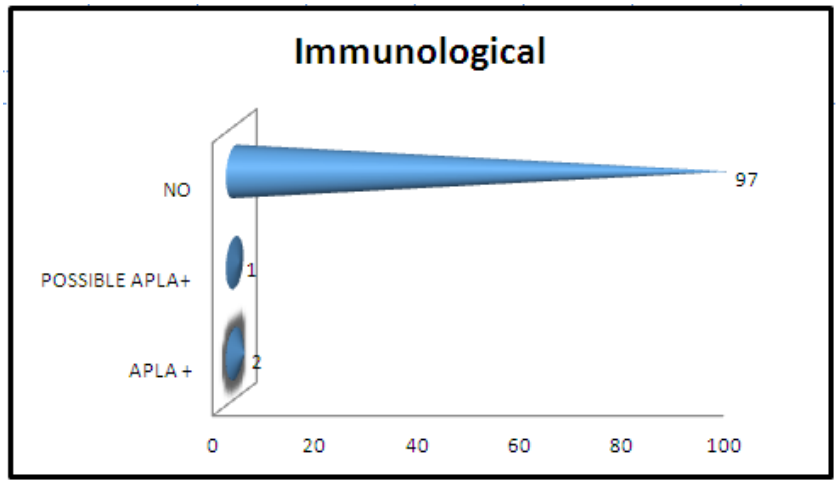
ANATOMICAL ETIOLOGY IN THE STUDY GROUP

HORMONAL FACTORSIN THE STUDY GROUP

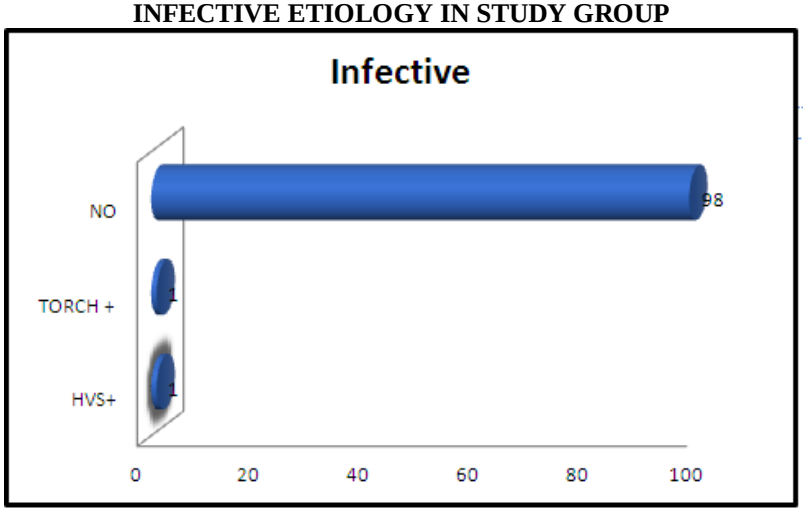




IMMUNOLOGICAL FACTORS IN STUDY GROUP



INFECTIVE ETIOLOGY IN STUDY GROUP



OTHER ETIOLOGICAL FACTORS

OTHERS			
		Frequency	**Percent**
	GDM	2	2.0
	GDM (I)	1	1.0
	GDM,GHTN	2	2.0
	GHTN	7	7.0
	RHD	1	1.0

MODE OF DELIVERY IN THE STUDY POPULATION

MODE OF DELIVERY			
		Frequency	**Percent**
	INCOMPLETE ABORTION	2	2.0
	LN	24	24.0
	LSCS	66	66.0
	MISSED ABORTION	5	5.0
	OUTLET FORCEPS	1	1.0
	SE	2	2.0
	Total	100	100.0

From this study of 100 pregnant women with recurrent pregnancy losses, the age distribution was maximum in 21 to 25 years(48%), Primary RPL was found in 81% of the patients whereas Secondary RPL was found in 19% of the patients. Almost 51% of the patients had 2 consecutive abortions, followed by three ,four, five and six consecutive abortions in 13%,3%,1% respectively.1 patient who had previous 9 no live pregnancies was also followed up during the study with great care and observation under admission. Among the various causes of RPL found in the study, endocrinal cause was found in maximum patients accounting for 23%, followed by anatomical factors in 6% of patients, APS positive in 3%, infective etiology in 2%, and genetic factors in 1% of these patients. Also it was found that obstetric complications like gestational diabetes mellitus and hypertensive disorders of pregnancy accounted for 12% of the pregnancy losses and in about 53% of the studied population, no definitive etiology was found , hence attributed to Idiopathic RPL. Regarding the outcome of the pregnancy, 91% of the patients had sustained successful pregnancy whereas 9% of them suffered from another abortion. Out of the 91% patients delivered, 75% had full term deliveries beyond 37 completed weeks of gestation and 16% had preterm deliveries. Thus majority of patients had successful outcome. Maternal age and complications and the number of previous abortions had a significant role in the present pregnancy. Appropriate treatment and regular follow up was done in all these patients which was the main reason for the successful outcome in most of the patients.

V. **Conclusion**:

Recurrent pregnancy loss is a great mental trauma to any mother and the obstetrician as with each pregnancy loss the chances of a successful next pregnancy outcome decreases. Hence evaluation of these patients should be started from the preconceptional period itself. Counselling of both the partners should be done and patient must be educated. All possible investigations must be carried out in a multi disciplinary approach to detect the cause earlier and prophylactic treatment to be initiated as soon as the pregnancy is

confirmed. Various treatments may be offered to these patients, but there is no universal recommendation . A full workup should be initiated following two consecutive losses to indentify treatable causes that include uterine abnormalities, APS, endocrine diseases and balanced translocations. Lifestyle modification should also be implemented to improve the reproductive prognosis. Despite this, the overall chance of pregnancy is good , in more than 50% of the patients with no intervention at all. However since half of the cases remain unexplained, regardless of the cause a thorough follow up with an important psychological support can help most of the couples to achieve a successful live birth.

Bibliography:

[1]. van den Boogaard E, Cohn DM, Korevaar JC, Dawood F, Vissenberg R, Middeldorp S, Goddijn M, Farquharson RG. Number and sequence of preceding miscarriages and maternal age for the prediction of antiphospholipid syndrome in women with recurrent miscarriage. Fertil Steril 2013;99: 188-192.

[2]. van den Boogaard E, Kaandorp SP, Franssen MT, Mol BW, Leschot NJ, Wouters CH, van der Veen F, Korevaar JC, Goddijn M. Consecutive or non-consecutive recurrent miscarriage: is there any difference in carrier status? Hum Reprod 2010;25: 1411-1414.

[3]. Nybo Andersen AM, Wohlfahrt J, Christens P, Olsen J, Melbye M. Maternal age and fetal loss: population based register linkage study. Bmj 2000;320: 1708-1712.

[4]. Royal College of Obstetricians and Gynaecologists, Scientific Advisory Committee, Guideline No. 17. The Investigation and treatment of couples with recurrent miscarriage, 2011.

[5]. Alberman E. The epidemiology of repeated abortion Early Pregnancy Loss. 1988. Springer, pp. 9-17.

[6]. Stray-Pedersen B, Lorentzen-Styr AM. The prevalence of toxoplasma antibodies among 11,736 pregnant women in Norway. Scand J Infect Dis 1979;11: 159-165.

[7]. Stray-Pedersen B, Stray-Pedersen S. Etiologic factors and subsequent reproductive performance in 195 couples with a prior history of habitual abortion. Am J Obstet Gynecol 1984;148: 140-146

[8]. Sugiura-Ogasawara M, Ozaki Y, Suzumori N. Mullerian anomalies and recurrent miscarriage. Curr Opin Obstet Gynecol 2013a;25: 293-298.

[9]. Sugiura-Ogasawara M, Suzuki S, Ozaki Y, Katano K, Suzumori N, Kitaori T. Frequency of recurrent spontaneous abortion and its influence on further marital relationship and illness: the Okazaki Cohort Study in Japan. J Obstet Gynaecol Res 2013b;39: 126-131.

[10]. Ogasawara M, Aoki K, Okada S, et al. Embryonic karyotype of abortuses in relation to the number of previous miscarriages. Fertil Steril. 2000;73:300–304.

[11]. Saito S, Ishihara O, Kubo H, et al. Sub-committee for the Survey on Clinical Practice Regarding Human Reproductive Loss, e.g., Habitual Miscarriage (Reproductive and Endocrine Committee) (Report of Special Committee in 2003). Journal of Japan Society of Obstetrics and Gynecology. 2005;57

Dr. V.G.Poorani, et. al. "Study on Epidemiology and Etiology of Recurrent Pregnancy Loss and Fetal Outcome in a Tertiary Care Center."*IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 20(04), 2021, pp. 21-26.