LUPUS ANTICOAGULANT AND PREGNANCY WASTAGE

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SUMMARY

A retrospective study of 41 cases with pregnancy wastage revealed that nearly 20% cases were lupus Anticoagulant 'positive'. 1st trimester and 3rd trimester losses were more common than 2nd trimester loss. V.D.R.L. test is a very insensitive test to detect this subject of Antiphospholipid syndrome. Of all the tests done, kaolin clotting time is found to be the most sensitive test; next is Activated partial thromboplastin time (APTT).

INTRODUCTION

Lupus Anticoagulant, coined by Feinstein and Rappapport (1972) has attracted the attention of obstetricians, in recent years. It is an immunoglobulin belonging to the antiphospholipid antibodies group. But it is inappropriately named because it is not restricted solely to S.L.E. (Systemic lupus erythometosus) patients nor does it have any anticoagulant properties. On the contrary it has coagulant activities in Vivo like thrombosis, embolism etc. Obstetrically it can cause early pregnancy wastage, I.U.D.; I.U.G.R. etc. The actual prevalance of L.A.C. (Lupus Anticoagulant) in women with pregnancy wastage in the absence of S.L.E. is not known and it varies from 3 to 48% (Henk et al 1991).

The object of this study was to analyse the prevalence of 'lupus anticoagulant' retrospectively in cases of fetal wastage.

MATERIALS & METHODS

Forty-one cases have been studied, who reported with a history of pregnancy wastages at different periods of pregnancy between 1992 and 1994, at Sri Aurobinda Seva Kendra, Calcutta and Ramakrishna Mission Seva

Ramkrishna Mission Seva Pratishan, Calcutta
Accepted for Publication on 7.3.96

Pratisthan, Calcutta.

A thorough history & clinical examination were carried out. Patients having only one pregnancy wastage were tested if they insisted on evaluation. Otherwise all cases of pregnancy wastage of two or more were studied irrespective of duration of gestations. All cases were investigated for V.D.R.L. test apart from tests for T.S.H. Toxoplasma antibody (Ig G and Ig M), Routine blood & Urine tests.

Tests done for the detection of L.A.C. were

1. Prothrombin time (P.T.)
2. Activated partial thromboplastin time (A.P.T.T.):
3. Kaolin clotting time using-
(K.C.T.) a) Platelet poor plasma (P.P.P.)
b) Platelet rich plasma (P.R.P.)

Prolongation of P.T./APTT/KCT by more than 5 seconds from the 'control' plasma tested simultaneously indicated the presence of L.A.C.

12 patients who had two babies without any pregnancy wastage, were also studied for L.A.C. to act as controls.

RESULTS

Table I shows the age distribution of the 41 cases under study. 51.2% cases belonged to the age group of "26 to 30" years.

Table II shows the cases distributed as per the number of pregnancies wasted, irrespective of the duration of gestation. This table shows that the patients having 2 (two) pregnancies wasted contributed the maximum number (41.5%). It has already been stated that those cases who had only 1 (one) pregnancy wastage but insisted for thorough evaluations before venturing for another pregnancy, were included for L.A.C. study. Table II shows that they accounted for about 36.7% of the present study population.

Table III show the distribution of the pregnancy wastages in different trimesters. Thus 41 study patients had 72 pregnancy

Table I
AGE DISTRIBUTION

Age in years	No. of patients	%
< 20	0	X
21 - 25	6	14.6
26 - 30	21	51.2
31 - 35	11	26.8
36 - 40	3	7.4
> 40	X	X
	41	100

Table II
DISTRIBUTION OF CASES ACCORDING TO THE NUMBER OF PREGNANCY WASTAGES

No. of pregnancy wasted	No.	%
1 (One pregnancy loss)	15	36.7%
2 (Two pregnancy loss)	17	41.5%
3 (Third pregnancy loss)	7	17.0%
4 (Four pregnancy loss	1	2.4%
5 (Five pregnancy loss)	1	2.4%
	41	100

Table III
TYPES OF PREGNANCY WASTAGE

	No.	% (out of total wastage)
1st trimester wastage	40	55.6%
2nd trimester wastage	15	20.8%
3rd trimester wastage	17	23.6%
	72	100

Table IV
NO. OF CASES HAVING V.D.R.L. POSITIVE

	No.	%
Study group (41 cases)	6	14.6%
Control (12 cases)	X	X

wastages, of these 72 wastages more than 50% cases were of 1st trimester wastage.

Table IV shows the percentages of the patients having V.D.R.L. positive tests. Only 14.6% of the study group had V.D.R.L. positivity.

Table V shows the incidence of L.A.C. positivity. The present study shows that 19.5% of the cases (study group) had blood tests for Lupus Anticoagulant 'positive' while none of the control group (12 cases) were positive.

Table V
INCIDENCE OF L.A.C. POSITIVITY

	No.	%
Study group (41 cases)	8	19.5%
Control group (12 cases)	X	X

Table VI
INCIDENCE OF POSITIVITY OF DIFFERENT PARAMETERS STUDIED- (OUT OF 8 CASES WHO WERE L.A.C. POSITIVE)

	Positive	Negative
P.T.	X	8
A.P.T.T.	6 (75%)	2
K.C.T :-		
P.P.P.	8 (100%)	X
P.R.P.	7 (87.5%)	1

Table VII
L.A.C. POSITIVITY ACCORDING TO THE TIME OF PREGNANCY WASTAGE (TOTAL NO. OF CASES 8)

	No.	%
1st trimester loss	8	100%
2nd trimester loss	3	37.5%
3rd trimester loss	8	100%

Table VI shows the positivity of the different tests done to detect L.A.C. presence. Table V has shown that only 7 cases were positive. Thus, none were positive by P.T. test. A.P.T.T. was positive in 6 cases (75%) and P.P.P. (Kaolin clotting time) positive in 8 cases (100%); while K.C.T. done with platelet rich plasma (P.R.P.) was positive in 7 cases (87.5%).

Table VII shows the incidence of L.A.C. positivity and the time of pregnancy wastage. It shows that the first trimester and 3rd trimester pregnancy wastages were more frequent than 2nd trimester wastages when L.A.C. was positive.

DISCUSSION

This is a retrospective analysis of cases of bad obstetric history, 19.5% of these cases were found to have 'positive' Lupus Anticoaglant tests. This is also reported by other workers. Koojiman et al (1991) reported that 13.3% of habitual aborters were L.A.C. positive. On the other hand Lubbes et al (1985) reported a low figure of 5.3% among habitual aborters. Thenmozhivalli et al (1994) also reported that 28.3% of their study cases were positive for L.A.C.

The present study reveals that more than 35% of cases had only 1 pregnancy loss. It is quite reasonable to presume that the present day trend of small family renders patients anxious even after a single pregnancy loss. They frequently request for thorough evaluations, consequently, it is very aunusual to have a patient with more than 3 pregnancy losses remaining unevaluated, in present day practice.

Out of the total wastages (72), more than 50% were in the 1st trimester (Table II). Again table VI shows that out of L.A.C. positive cases, 100% had history of either 1st trimester or 3rd trimester losses.

The criteria for defining the L.A.C. are being constantly updated. There is no single test which can reliably detect L.A.C. Thus several tests are done to have the maximum pick up rate. The criteria proposed by the working party on acquired inhibitors of coagulation of the International Committee on thrombosis & Haemostasis were too stringent (Green et al 1983). The other criteria proposed have not received wide-spread acceptance (Schleider et al 1976), Exner et al 1978; Thiagarajan et al 1986). Kaolin clotting time is accepted as a reasonably sensitive test to detect L.A.C. (Exner et al 1978). This also tallies with the present study (Vide table VI).K.C.T. (Kaolin clotting time) is the most sensitive test according to table VI. It is 100% positive when done with 'platelet poor plasma' (P.P.P.) and more than 85% positive when done with platelet rich plasma. On the contrary, A.P.T.T. is positive in only 75% cases.

CONCLUSION

Lupus Anticoagulants and its obstetric significance were under-diagnosed & under reported before. In recent years, the obstetricians dealing with cases of pregnancy wastages, are trying to evaluate the causes of poor obstetric performances.

Present study shows a significant contribution of L.A.C. in causing pregnancy wastages. Different tests done to detect L.A.C. were studied. It is an expensive affair. But the present series, though small, shows that Kaolin clotting time (using P.P.P. and P.R.P.) is the most sensitive test. This

will help to cut down the cost to a great extent. It is suggested to include the assay for L.A.C. as one of the laboratory investigations as a routine for patients with bad obstetrical history to identify the high risk mother.

ACKNOWLEDGEMENTS

The author is grateful to the secretary, Ramkrishna Mission Seva Pratistan & Superintendent, Sri Aurobinda Seva Kendra, Calcutta for their consents to use hospital records. Guidance from Prof. D. Bhattacharya, Dept. of Haematology, R.K.M. Seva Pratistan, is gratefully acknowledged.

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