

in the three groups.

## RESULTS

When sera from 72 pregnant women (group-1) with age matched non-pregnant (group-2) women were studied under similar conditions, the prevalence of serum IgG aCl was observed to be less in group-2. The prevalence of IgG aCl in group-1 patients was 37.5% where as in group-2 patients was 16.7%,  $p < 0.001$ , significant (Table-2). In group-3 patients none of the patients had positive levels of IgG aCl. The levels were indeterminate in 16.7% of group-1, 25% of group-2 and 4.2% of group-3 patients and negative in 45.8%, 58.3% and 95.8% respectively. None of the patients in any of the groups had strongly positive levels of aCl IgG.

**Table-2:** Prevalence of Anticardiolipin antibody IgG

Inference	Group-1 (n=72) n(%)	Group-2 (n=72) n(%)	Group-3 (n=72) n(%)
Negative	33(45.8%)	42(58.3%)	69(95.8%)
Indeterminate	12(16.7%)	18(25%)	03(4.2%)
Low-medium positive	27(37.5%)	12(16.7%)	0
Strong positive	0	0	0

## DISCUSSION

Recurrent pregnancy loss (rpl) has been associated with anticardiolipin antibodies<sup>4,5,6</sup>. These antibodies reduce the growth of yolk sac and embryo and cause a maternal hypercoagulability leading to pregnancy loss in first trimester more so during the eighth and ninth weeks of pregnancy when the placenta replaces the yolk sac<sup>9</sup>.

Screening of these antibodies is mandatory in pregnant women with recurrent pregnancy loss for instituting efficient therapeutic regimen to achieve a successful pregnancy outcome<sup>6</sup>. The data obtained in the present study clearly indicate the presence of aCl IgG in patients with history first trimester recurrent abortions irrespective of the state of the patient pregnant or non-pregnant at the time of testing. Although the prevalence of aCl IgG was lower in the non-pregnant condition as compared to during pregnant state. This finding is in concurrence with a report<sup>10</sup> that anticardiolipin antibodies decrease or may disappear in between pregnancies only to recur with increased activity in the subsequent pregnancy and lead to fetal loss but no numerical data has been reported. In conformity to our report, other researchers<sup>3</sup> on a study of normal pregnancy have observed decrease in total serum IgG levels during second and third trimesters of pregnancy and post partum. This observation is also in keeping with a study<sup>11</sup> that has reported a post partum decrease in the B-cell count responsible for antibody mediated immunity. However, another worker<sup>12</sup> observed that the circulating B- cell levels during gestation remains unchanged. It had been suggested that maternal immune response is largely maintained during gestation, maternal susceptibility and the ability to combat the infection should be similar in both the pregnant and non-pregnant state.

The frequency of recurrent abortion in the presence of aCl antibodies is considerably increased. In a report<sup>13</sup> it was observed that fetal death occurred in 10 of 13 (77%) patients with abnormal and in 2 of 37(5%) with normal aCl levels. A study on plasma aCl levels in post-menopausal (non pregnant) women in other diseases including myocardial infarction demonstrated high aCl levels as a risk factor. In another report<sup>9</sup> aCl antibodies were associated with 743 post partum patients who had miscarried between 8 and 9 weeks of pregnancy. The finding in the present study that aCl IgG are positive during the non pregnant state in women with recurrent abortions in spite of the incidence being almost half when compared during the pregnancy, suggests that screening and treatment for these antibodies should be done as soon as the pregnancy is diagnosed or even pre conceptually. Treatment if not instituted can lead to abortions and fetal death in a huge percentage (96.8%) of pregnancies<sup>14</sup>. In the present study, 12 out of 72 (16.7%) patients of group-2 tested positive. This can be explained on the basis of a report<sup>10</sup> which suggested that anticardiolipin antibodies may reduce in between pregnancies. Since women with aCl antibodies have a significant risk of adverse pregnancy outcome, the non pregnant patients with history of recurrent abortions even with slightly raised levels of these antibodies should be considered as high risk group. Early treatment of such patients may result in successful embryo implantation and provide protection against thrombosis of uteroplacental vessels thereby increasing the chances of successful pregnancy outcome. This may benefit these patients of recurrent pregnancy loss and the required treatment should be started pre-conceptually so as to increase the chance of successful outcome of their precious pregnancy.

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