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GROUP B STREPTOCOCCAL INFECTION AND RPL – A CASE REPORT

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ABSTRACT Recurrent pregnancy loss (RPL) has become an important cause of pregnancy loss, with major emotional implications to the couple experiencing such an event. Increasing age of women, smoking, obesity or polycystic ovary syndrome (PCOS) and a previous history of miscarriage and various infections are also considered risk factors for RPL. A thorough clinical history and examination, maternal serum biochemistry and ultrasound findings are important to determine the treatment options and provide valuable information for the prognosis. A woman who do not have a explanation for the RPL maybe subjected to ano-genital swab culture to identify infections, as chronic and subclinical infections can cause abortion. As bacterial vaginosis has been already established with causing recurrent pregnancy loss and preterm delivery. Here we are presenting a case of successful pregnancy outcome following treatment for GBS vaginal infection where other possible aetiologies were ruled out.

KEYWORDS : Recurrent Pregnancy Loss, Infections. Preterm Labour, GBS.

INTRODUCTION:

Recurrent pregnancy loss is defined as three consecutive pregnancy losses before viability[1].this affects 1-3% of women who are trying to conceive.[2] Early pregnancy loss is a very common event, approximately 8-20% of pregnancies end in spontaneous abortion before 20weeks of gestation and 80% of them occurring before 12 weeks [3]. Though the number of overall unrecognised early pregnancy losses is even higher. The risk of abortion increases with each previous pregnancy loss but rarely exceeds 40-50%. It has several etiologies such as genetic abnormalities, hormonal and metabolic disorders, uterine anatomic abnormalities, infectious causes, autoimmune disorders, thrombophilic disorders, alloimmune causes, and idiopathic. Though the data that vaginal infections causing recurrent pregnancy loss is limited.

CASE DISCUSSION

Mrs X 28 years old, presented to the OPD as a case of RPL in the first trimester. She is in a non-consanguineous marriage since 4 years. Her obstetric history was remarkable with four unexplained fetal loss in the first trimester. No other details regarding the previous pregnancies were available except for the ultrasonographic evidence suggestive of anembryonic gestation in her previous pregnancy, for which she had undergone suction and evacuation. She was advised to send the abortus for karyotyping but refused due to financial constraints. There was no history of primary infertility or any delay of conception. Menstrual cycles were regular with no dysmenorrhea or any other symptoms. Gynaecological physical examination was unremarkable. There was no family history of recurrent pregnancy loss. No history of uterine surgery in the past. No history of trauma, ingestion of tobacco or alcohol intake. She is not a known diabetic, hypertensive or any familial disease. Evaluation for recurrent pregnancy loss was done. Antiphospholipid Antibody (APLA) Syndrome was excluded. She was hypothyroid on medications. She tested negative for anti-Thyroid antibodies. Gram stain high vaginal swab was sent to rule out vaginal infections which later showed growth of group B Streptococcus (Streptococcus Agalactiae) following which she was treated with antimicrobial Tablet Ampicilin for 7 days and Folic acid supplementation. Following this patient was asked to come back later for her pre conceptional counselling. Patient conceived spontaneously within a period of 6 months and was empirically started on aspirin and progesterone. She was advised regular ante-natal care. The pregnancy was uneventful and was managed expectantly and delivered at term, with a good neonatal outcome by caesarean delivery.

DISCUSSION

Bacteria that are normal commensals of the vaginal flora of the host have the potential to cause symptoms of disease, but they apparently require some alteration in the microenvironment to do so. *C. albicans*, group B *Streptococcus* (GBS), *G. vaginalis*, and *Escherichia coli*, which are organisms that are commonly isolated from the lower female genital tract, can, under selected circumstances, cause disease.[4]GBS has been associated with preterm delivery, chorioamnionitis, endometritis and neonatal sepsis. Group B Streptococcus is present in the intestinal flora of 20–40% of adults (this is called 'colonisation'). People who are colonised are called 'carriers', including pregnant women. Any severe infection that leads to bacteraemia or viraemia can cause spontaneous abortion. It was identified as the key pathogen in asymptomatic intrauterine infections associated with spontaneous mid trimester abortions. the role of infection in recurrent miscarriage is unclear.[5] For an infective agent to be implicated in the aetiology of repeated pregnancy loss, it must be capable of persisting in the genital tract and avoiding detection, or must cause subclinical infection with minimal or no symptoms.[6]

The main mechanisms by which infections induce abortion include:

(a) Production of toxins or cytokines (i.e. tumor necrosis factor-a), which induce uterine contractions or damage the feto-placental unit;
(b) Fetal infection, resulting in fetal death or life-threatening malformations;
(c) Placental infection, with subsequent placental insufficiency and fetal death;
(d) Endometrial chronic infection, interfering with embryo implantation;
(e) Amnionitis, which causes abortion in the first trimester as well as preterm labor in the third trimester.[7]

In a study done by Attila Toth in New York Hospital ,women presenting with recurrent pregnancy losses and with no other identifiable cause for RPL ,who showed positive genital tract cultures for Group B Streptococcus infection were successfully managed with pre and post-conceptional antibiotic therapy. 6 such pregnant women were taken in the study and all had successful pregnancy outcome. An infectious etiology was thus suggested.[8] LC Colicchia et al, 2015 in a retrospective study done over 10years showed GBS colonization in the subsequent pregnancy was independently associated with GBS colonization status in the first pregnancy, preterm delivery in the index pregnancy and a history of early pregnancy loss. Among the sample of women who were GBS positive in their first pregnancy , the risk of repeat colonization was higher with a history of preterm delivery or pregnancy loss <20 weeks' gestation in first pregnancy.[9]In a study done by Wei Dai et al, China 2019 found that GBS carriers were significantly more frequent in pregnant women with abortion history ,gestational diabetes mellitus and pregnancy-induced hypertention. [10]

CONCLUSION

All patients with recurrent pregnancy loss should be investigated thoroughly and treated keeping in mind their mental and financial status. Chonic or subclinical genital infections are often overlooked when investigating a patient of recurrent pregnancy loss, although our patient was healthy, in a monogamous relationship with low risks of STDs, these causes should be tested. And specific antibiotic sensitivity according to the local biogram should be used for treatment of the same.

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