

### ***Recurrent Miscarriage (RM): Quick Thoughts***

Approximately 1 % of infertile couples experience recurrent miscarriages. Surprisingly, the chance of having a successful pregnancy in couples with recurrent miscarriages is not improved if they have had a successful pregnancy. The risk of miscarriage increases as the woman ages and as she has successive miscarriages.

Acquired maternal thrombophilia is a well recognized cause of recurrent miscarriage. Lupus anticoagulant and anticardiolipin antibody should be obtained. More recently an increased incidence of recurrent miscarriages has been suggested in women with inherited thrombophilias including Factor V Leiden deficiency, activated Protein C resistance, prothrombinG20210 A and protein S deficiency.

Obesity is associated with an increased risk of recurrent miscarriage. (Two fold higher).

**What about recurrent miscarriage and Natural Killer (NK) cells?** Much of the evidence is contradictory. NK cell are found in the inner lining of the uterus and the interface of a pregnancy and the uterus (decidua). Unfortunately there are morphological and functional differences in the NK cells found in the uterus and those found in the peripheral blood. In addition the percentage of CD56+NK cells in the peripheral blood of healthy women varies from about 5 to 29% and is affected by sex, stress, ethnicity, and age. So testing of peripheral blood NK cells should not be performed routinely in the evaluation of miscarriage.

Look at parental chromosomes especially in young women who are repetitive miscarriers. This is especially important in young women and those who have had second trimester miscarriages.

**Should the products of conception be sent after a miscarriage in women with RM?**  
Not usually. A normal karyotype suggests that other treatable causes of miscarriage may exist. A karyotype that returns 46 XX may simply be cross contamination with mother's cells.

Anatomical anomalies such as uterine septum, fibroids or polyps should be excluded

**What about MTHFR polymorphisms?** This may result in high levels of homocysteine and this may increase the risk of RM. Fortunately the treatment is usually part of the dietary armamentarium of women trying to conceive, folic acid.

**What should be the evaluation of the couple with RM?**

1. Consultation
2. Ovarian reserve testing in women over the age of 35 ( AMH or day 3 FSH and estradiol)
3. HSG to rule out anatomical problems
4. Anticardiolipin antibody and lupus anticoagulant antibody

5. Factor V, Protein S and C activity, PT 20210 A
6. Parental karyotype
7. Thyroid and Hemoglobin A1c

Treatment is based on any abnormal findings. In most cases an abnormality is not ascertained. In these cases, the couple should consider treatments that may optimize follicular development including oral or injectable medications followed by progesterone supplements after ovulation. Please consult Drs Meyer or Couchman with any further questions.