

Future pregnancy outcome in women with a history of unexplained recurrent miscarriage: effect of age, ethnicity, number of previous miscarriages.

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INTRODUCTION

The European Society of Human Reproduction and Embryology (ESHRE) Special Interest Group for Early Pregnancy (SIGEP) has recently clarified the evidence based approach for investigation and management of recurrent miscarriage (RM) which affects 1% of fertile couples¹.

After comprehensive investigation, in over 50% of couples with recurrent miscarriage (3 or more miscarriages) no cause is identified to account for their pregnancy losses. Such couples are said to have 'unexplained' recurrent miscarriage (URM). In this group of women, a high live birth rate has been reported without pharmacological intervention if offered supportive care alone in the setting of a specialist miscarriage clinic^{2, 3}.

The aim of this study was to provide a robust evidence base upon which couples with URM can be counselled regarding the outcome of future untreated pregnancies with regard to female age, number of previous miscarriages, previous treatment for infertility and ethnicity.

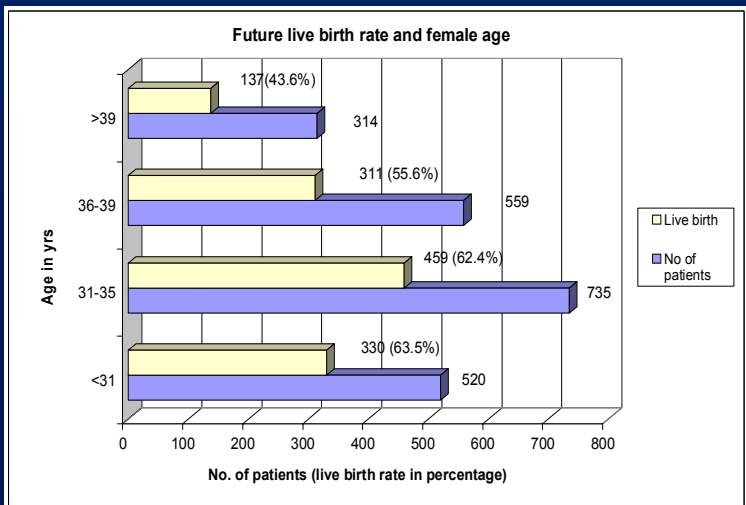
MATERIALS AND METHODS

Between July 1988 and December 2005, 2132 consecutive women (median age 34 years; range 17- 47) attending the St Mary's Hospital's Recurrent Miscarriage Clinic were identified after investigation as having URM. Of the study cohort, 85.1% were Caucasian, 8.7% were Asian, 5.3% were Afro-Caribbean and 0.9% were Oriental. All women had a normal peripheral blood karyotype, normal early follicular phase hormone profile, normal uterine anatomy and ovarian morphology on 2D vaginal ultrasound. All had a normal response to activated protein C and none carried the Factor V Leiden or Prothrombin G20210A mutations. None had Antiphospholipid syndrome. All partners had a normal peripheral blood karyotype.

The outcome of the next pregnancy was studied. All women attended a specialist early pregnancy clinic until 12 weeks gestation for serial ultrasound scans and supportive care. No pharmacological treatment was prescribed. All pregnancies were conceived spontaneously.

RESULTS

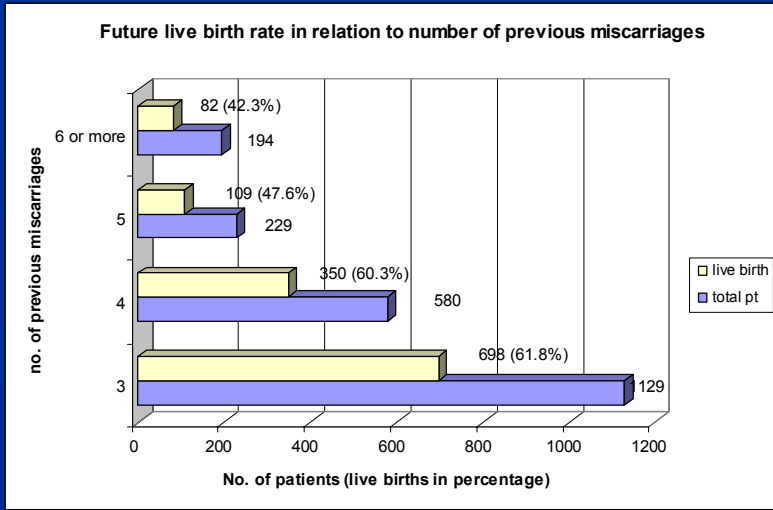
The live birth rate (LBR) in the next pregnancy women in the age groups (a) less than or equal to 30 years of age was 63.5% (330/520), (b) 31–35 years was 62.4% (459/735), (c) 36–39 years was 55.6% (311/559) and (d) those greater than or equal to 40 years was 43.6% (137/314).



Women less than or equal to 30 years of age had a higher LBR compared to (i) women in the age group of 36–39 years $p < 0.008$ and (ii) those greater than or equal to 40 years of age, $p < 0.001$.

The LBR was higher in women less than or equal to 35 years of age when compared to women in the age group of 36–39 years ($p < 0.001$). The LBR in women in the age group of 36–39 years was also higher when compared to women greater than or equal to 40 years of age ($p < 0.001$).

The future LBR in women with a history of (a) 3 miscarriages was 61.8% (698/1129); a (b) 4 miscarriages was 60.3% (350/580); a (c) 5 miscarriage was 47.6% (109/229) and (d) ≥ 6 miscarriages was 42.3% (82/194).



Women with ≥ 6 miscarriages had a lower LBR than those with between 3 and 5 miscarriages [82/114 (42.3%) vs. 1157/1938 (59.7%); $p < 0.001$].

Women with no history of infertility treatment had a higher LBR than those previously treated for infertility [976/1646 (59.3%) vs. 166/322 (51.6%), $p = 0.009$].

The LBR was significantly higher amongst Caucasian women [968/1626 (59.5%)] compared with Asian women [68/139 (48.9%); $p = 0.01$] or Afro-Caribbean women [50/116 (43.1%); $p < 0.001$].

All the three groups were matched in the age and number of previous miscarriages.

Ethnicity	Live births/Total births	LBR (%)	Age in years	No. of previous miscarriages
Caucasian	968/1626 ^a	59.5	34	3
Asian	68/139 ^b	48.9	33	3
Afro-Caribbean	50/116 ^c	43.1	34	3

^a versus ^b: $P = 0.01$; ^a versus ^c: $P < 0.001$

Future live birth rates were unaffected by smoking habits and menstrual irregularities.

CONCLUSIONS

This large data set of over 2000 women forms a robust evidence base for the counselling of couples with URM about the outcome of their subsequent pregnancies. The chances of a LB are high for women with a history of UEM attending a specialist recurrent miscarriage clinic without any pharmacological intervention. Two thirds of women under the age of 35 years, and 56% of the women between the ages of 35–39 years, and 44% of the women over the age of 39 years had a live birth in their subsequent pregnancies.

Besides the younger age (less than 31 years), the factors associated with higher future LBR in women with URM were; Caucasian race, a history of not more than 3 miscarriages, and those who did not receive treatment for infertility. The higher live birth rate noted among the Caucasian women was independent of the age factor, or number of previous miscarriages. Differences noted in the LBR between ethnic groups demands further investigation.

References

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