Can Anti-Müllerian Hormone Levels Predict Future Pregnancy Outcomes in Recurrent Pregnancy Loss?

Jill Mitchell, Sarah Cullen, Aoife McEvoy, David Crosby, Cathy Allen

The National Maternity Hospital
Vita Gloriosa Vita ~ Life Glorious Life

INTRODUCTION

Serum Anti-Müllerian Hormone (AMH) levels have been shown to be lower among women who have experienced recurrent pregnancy loss (RPL) compared with the general population1-3. However, it is unclear whether it can predict livebirth.

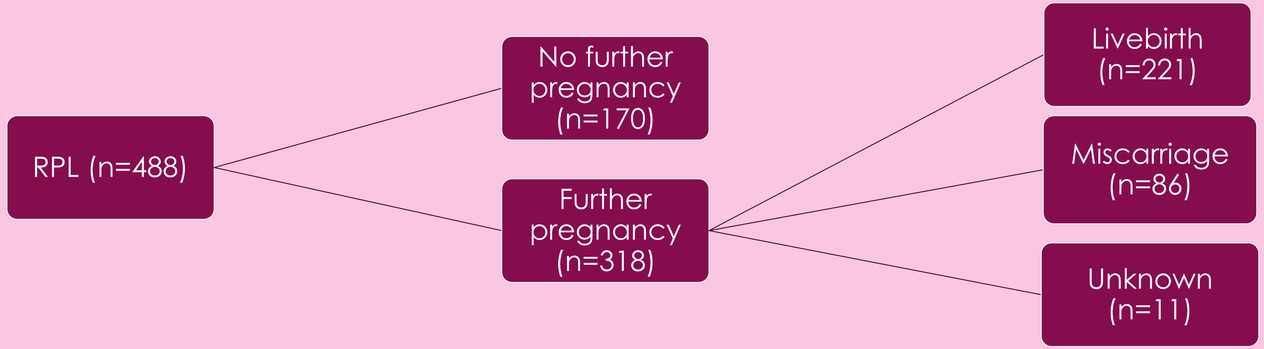
AIM

This study aims to determine whether AMH can predict the likelihood of a livebirth in women with RPL.

METHODS

Prospective analysis of a consecutive cohort of women undergoing investigation for RPL in a tertiary referral centre over a seven-year period (August 2014 -December 2021). Pregnancy outcome was defined as livebirth or further pregnancy loss.

Subsequent Pregnancy Outcomes in RPL



Does AMH Influence Subsequent Pregnancy Outcome in RPL?

No difference in median AMH levels between the LB group and the further pregnancy loss group (11pmol/L vs 9pmol/L, p=0.083).
AMH did not influence pregnancy outcome (p=0.30, 95% CI=1.01 [0.99,1.04])

Does AMH Influence Clinical Pregnancy Rates in RPL?

AMH did not affect clinical pregnancy rates (p=0.77, 95% CI=0.99 [0.98, 1.01])

What Factors Influence Subsequent Pregnancy Outcomes?

Abnormal pelvic ultrasonography (p=0.04) and an abnormal parental karyotype (p=0.04) were associated with an increased likelihood of a subsequent pregnancy loss

Relationship between AMH and pregnancy outcomes in RPL adjusting for age and previous livebirth

Constant	p=0.47	0.01
AMH Level	p=0.30	95% CI= 1.01 (0.99, 1.04)
Age	p=0.25	95% CI = 1.07 (0.95, 1.20)

ANALYSIS

Analysis was performed using descriptive statistics, chi-square models and logistic regression models adjusting for maternal age and previous livebirth. Exclusion criteria for the regression analysis included abnormal parental karyotype and abnormal pelvic ultrasound scan.

CONCLUSION

Although AMH levels may have some utility in counselling of some couples with RPL, these contemporaneous data indicate that low AMH does not negatively influence pregnancy outcome in women with recurrent pregnancy loss.