

VIRTUAL PRENATAL CARE: THE IMPACT OF TELEMEDICINE AND HOME-ULTRASOUND ON MATERNAL ANXIETY AND ATTACHMENT DURING PREGNANCY IN WOMEN WITH A HISTORY OF PREGNANCY LOSS



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INTRODUCTION

We aimed to study the effects of twice-a-week telemedicine visits on maternal anxiety and antenatal attachment in women with a history of previous pregnancy loss by complementing routine prenatal care with home-ultrasound.

METHODS

Randomized controlled trial. Women with history of pregnancy loss (greater than 20 weeks) were recruited and randomized 1:1 in the treatment arms early in their subsequent pregnancy in our high-risk clinic. The control group received routine prenatal high-risk care per protocol, while the study group received additional twice-a-week telemedicine visits with a maternal-fetal-medicine specialist, which included a home-ultrasound scan (for fetal heart-rate, movement, and amniotic fluid) for reassurance. The scan was performed by the patient using a home-ultrasound device (Pulsenmore ES) with physician authorization and guidance.

Maternal anxiety was evaluated by the validated State-Trait Anxiety Inventory Scale (STAI-S) and maternal attachment was evaluated by the validated Maternal Antenatal Attachment Scale (MAAS-2) at 4 time points throughout pregnancy. The primary outcome was the STAI-S score at the last prenatal visit. Power analysis required 40 patients to demonstrate a 20% difference in the primary outcome.

The study was approved by the local IRB and all patients signed an informed consent upon randomization.

RESULTS

To date, 32 patients completed follow-up, with 16 per arm. There were no differences in demographics or pregnancy outcomes between groups. The study group demonstrated lower anxiety levels at the last prenatal visit (STAI 42.2 ± 4.7 vs. 49.6 ± 5.8 , p less than 0.001), higher differences between STAI scores at the first vs. last visit (-9.9 ± 2.7 vs. -7.1 ± 3.1 , $p=0.011$), and higher MAAS-2 scores (50.4 ± 3.9 vs. 47.2 ± 4.5 , $p=0.039$) at last visit.

CONCLUSION

Routine prenatal telemedicine visits with home-ultrasound can lower maternal anxiety and improve attachment in women with previous pregnancy loss.

