

**ABORTION RISK IN PATIENTS WITH OVULATORY
DEFECTS ONCE VIABILITY IS CONFIRMED
SONOGRAPHICALLY**

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Abstract

The risk of spontaneous abortion after fetal viability has been confirmed in a group of patients with ovulation defects is presented. The results are quite comparable to similar studies performed on the general population of pregnant women. If just the presence of a positive fetal heart is used as the baseline then 3.7% aborted by 20 weeks. However, when more exacting criteria are used in determining normal fetal study by ultrasound, then only 1.3% aborted.

Introduction

The development of chorionic villus sampling (CVS) has established a need to determine the risk of spontaneous abortion in patients not having CVS who have established a viable pregnancy by ultrasound assessment at a gestational age of 7-9 weeks. Harlap et al determined that 14.4% of pregnant women seen one week after missing their menstrual period will abort before the 28th week (1). They also determined that 6.7%, 5.7%, and 5% of women at the 7th, 8th, and 9th week respectively will abort by 16 weeks. However, these figures do not exclude non-viable cases eg. missed abortions.

Christiaens and Stoutenbeek recently reported 9 spontaneous abortions out of 274 women (3.3%) who had a

positive heart beat on ultrasound prior to 10 weeks (2). Wilson et al reported 17 spontaneous abortions out of 796 cases (2.1%) where a normal viable embryo had been previously demonstrated by sonography (3).

These data are important not just as a basis to determine the relative risk of certain procedures eg. CVS, in causing fetal mortality but also as a way of assuring anxious pregnant women that their risk of spontaneous abortion is quite low once viability by ultrasound is established at 7-10 weeks. Naturally, the most anxious of these patients are women who have had infertility problems or a history of previous spontaneous abortion. However, since this group has an increased risk of spontaneous abortion as compared to the normal population, one may question whether the physician can provide the same assurance of fetal outcome once sonographic viability has been established by 7-10 weeks.

We thus decided to evaluate the risk of fetal demise up to a gestational age of 28 weeks in 536 women with sonographically viable embryos at 7-9 weeks who had a previous history of infertility or spontaneous abortion and had been treated with ovulation-inducing drugs eg. clomiphene, human menopausal gonadotropins, or bromocryptine, or had been treated with progesterone in the luteal phase.

Materials and Methods

The patients used in this study were all patients in 1983 who had a viable fetus on pelvic ultrasound be-

tween 7-10 weeks gestation. The requirement was that they had to either have a luteal phase defect (as defined by an endometrial biopsy taken in the late luteal phase that dated at least 3 days early) which was treated by progesterone in the luteal phase and/or an ovulation defect treated with clomiphene citrate, bromocryptine, or human menopausal gonadotropins (HMG).

A pelvic ultrasound was performed at 7-10 weeks gestational age. All patients with positive fetal heart beats were included. However, a normal study was only considered if there was no more discrepancy than 2 weeks between the crown-rump length (CRL) and the sac size, and the sac size and CRL had to have good correlation with dates from conception along with positive cardiac motion. All patients were either continually monitored and assessed at 20 weeks either by another ultrasound or by positive fetal heart tones.

All patients were scanned in the supine position utilizing the full bladder technique. A high resolution realtime sector scanner with a 3MHz medium focus transducer was used on all patients.

Results

A total of 536 patients met the criteria and were used in the study. Twenty patients (3.7%) had a viable fetus but aborted by 20 weeks. However, 13 of these patients did not have a normal study in that either there was a discrepancy between sac size and CRL or a discrepancy between CRL and dates of conception. Thus, only

7 patients (1.3%) were actually thought to have a perfectly normal ultrasound at 7-10 weeks and yet had a spontaneous abortion before 20 weeks.

The distribution of the patients were as follows: clomiphene citrate- 6 losses out of 160; HMG- 7 losses out of 194; progesterone exclusively- 7 losses out of 182. The age distribution of the women with the 20 spontaneous abortions were as follows: over 35- 2; 31 to 35- 9; 26 to 30- 6; 25 or under- 3.

Discussion

The risk of spontaneous abortions in women with luteal phase defects is certainly increased and approximately 35%. An increased risk of abortions is also present in women who conceive with ovulation inducing drugs eg. clomiphene citrate (5) or HMG (6).

The data presented shows that despite the increased risk of spontaneous abortion in patients with ovulation defects, once viability is established by pelvic sonography at 7-10 weeks, this group has no greater risk of fetal loss than the general population. The population studied by Christiaens and Stoutenbeek was considered by the authors to be potentially more representative of high-risk patients than the general population. Wilson et al did not feel that their group was similarly biased. Comparing to Wilson's data where 16 of 796 (2%) aborted after a normal embryo or fetus by current ultrasound assessment, 7 of 536 (1.3%) of our patients with known ovulation defects similarly aborted after a perfectly

normal ultrasound study at 7-10 weeks. The study by Christiaens and Stoutenbeek seems to have included all patients with a positive fetal heart beat and their subsequent spontaneous abortion rate was 9 of 274 (3.3%). If we similarly are less strict in our criteria of selection to include all women with positive fetal heart beats then 20 of 536 aborted (3.7%) aborted.

Therefore, patients with ovulation defects with an increased risk of spontaneous abortions should have the same assurance as the general population that once fetal viability is confirmed they have the same low risk as other patients of aborting. Similarly, if any procedures eg. CVS are performed on this group after viability has been confirmed one should not worry about an increased intrinsic risk of abortion in this group.

References

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