Acceptance Rate of Cervical Length Screening Before and After Implementation of Patient Education Pamphlet

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Introduction

The rate of preterm birth in the United States increased over the previous 10 years to 10.2% in 2019. Short cervical length is a known risk factor for preterm delivery regardless of parity or obstetrical history. Knowledge of cervical length allows obstetricians to implement interventions to prolong gestation and prevent preterm birth. Our hospital offers universal cervical length screening with transvaginal ultrasound for all women undergoing second trimester anatomy scan. The acceptance rate of cervical length screening was 50% (406/813) in 2016. To increase the rate of acceptance of cervical length screening, a pamphlet was introduced in March 2018. The pamphlet:
1. describes the transvaginal ultrasound procedure and the purpose of it
2. summarizes neonatal morbidity and mortality associated with prematurity
3. describes possible interventions if short cervix is discovered, including progesterone supplementation and cerclage.

The study objective is to compare the acceptance rate of cervical length screening before and after implementation of the patient pamphlet in March 2018.

Methodology

This is a retrospective study of singleton pregnancies who underwent an anatomy scan between 18 0/7 weeks and 23 6/7 weeks of gestation from March 1, 2018 to March 1, 2019 at Saint Francis Hospital Maternal Fetal Medicine Unit. Women with a prior preterm delivery, uterine anomaly, or a multiple gestation were excluded. Maternal demographics and pregnancy characteristics were recorded. Rate of acceptance of transvaginal ultrasound for cervical length screening after introduction of the pamphlet was determined and compared to acceptance rate before implementation of the pamphlet. To assess the secondary outcomes of delivery <37 weeks and patient characteristics, the screened group was compared to those who declined. Statistical analysis included Student’s t-test, Chi square analysis and Fisher’s exact test.

Results

• After introduction of the pamphlet, 903 (86.2%) of 1,048 women accepted cervical length screening; a significant improvement when compared to the 50% acceptance rate before pamphlet implementation (p<0.01).
• There was no difference in spontaneous preterm birth between patients that accepted screening (4.2%) and those that declined screening (2.8%) (p =0.5).
• More nulliparas than multiparas accepted screening (89.1% vs 83.7%, p=0.01) and the proportion of women with hypertension was higher in the declined group (7.6% vs 3.4%, p=0.02).
• There was no difference in screening preference by maternal age, body mass index, ethnicity, pregestational diabetes, smoking, drug use, or insurance type.
• Similarly, there were no differences in pregnancy outcomes between the two groups.
• However, of 10 sonographers who performed more than 50 ultrasounds, 5 had acceptance rate >90%, 3 had acceptance rate between 80-90%, and 2 had acceptance rate between 70-80%.

Conclusion

• Acceptance rate increased after educating patients on the purpose of cervical length screening using a pamphlet.
• Sonographers may influence the decision to accept or decline cervical length screening.