P-749  How do different uterine anomalies compare for pregnancy complications? An evaluation of a large American population database

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Study question: What type of uterine anomalies cause alterations in pregnancy complications, compared to other anomalies, based on analysis of the Healthcare-Cost and Utilization-Project-Nationwide Inpatient Sample (HCUP-NIS) database?

Summary answer: After controlling for confounders, bicornuate uteri had lower risks and arcuate uteri had increased risks of cesareans and mostly similar risks of other outcomes.

What is known already: Women with mullerian anomalies are known to have increased risks of adverse obstetrical outcomes. Comparison of different adverse obstetrics outcomes between women with different type of uterine anomalies has minimally been studied.

Study design, size, duration: This retrospective population-based cohort study utilized data from the HCUP-NIS from 2010-2014, inclusively. A cohort of all deliveries during the study period was created. Within this group, Six thousand and one hundred ninety-five deliveries were to women with bicornuate uteri, 798 were to women with arcuate uteri, 2255 were in women with didelphys uteri, 802 were from women with unicorticate uteri and 1404 were deliveries to women with septate uteri.

Participants/materials, setting, methods: HCUP-NIS is the largest inpatient sample database in the USA and is comprised of hospital stays throughout the country. It provides information relating to seven million inpatient stays yearly, includes 20% of admissions, and represents over 96% of the American population. Multivariate logistic regression was conducted to explore associations between uterine anomalies and delivery outcomes. According to the Tri-Council Policy Statement (2018), IRB approval was not required, given data was anonymous and publicly available.

Main results and the role of chance: After adjustment for confounders, women with bicornuate uteri had less risk for chorioamnionitis (aOR:0.6, 95%CI:0.5-0.8-P = 0.003), were more likely to deliver vaginally or by operative vaginal delivery (aOR:1.4, 95%CI:1.1-1.9-P = 0.01), and less likely to deliver by CD when compared to the other anomalies (aOR:0.6, 95%CI:0.5-0.6-P = 0.0001). They had lower risk of SGA (small for gestational age) (aOR:0.8, 95%CI:0.7-0.9-P = 0.03).

Pregnant women with arcuate uterii had lower risk of preterm delivery compared to the other anomalies (aOR:0.6, 95%CI:0.5-0.8-P = 0.0001), less chance of having delivered by an operative vaginal delivery (aOR:0.5, 95%CI:0.2-0.9-P = 0.04), and were at higher risk of having a CD (aOR:1.6, 95%CI:1.4-2.2-P = 0.0001).

Pregnant women with didelphys uteri had higher risk of PPROM (aOR:1.6, 95%CI:1.3-1.9-P = 0.0001), preterm delivery (aOR:1.5, 95%CI:1.3-1.6-P = 0.0001), CD (aOR:1.4, 95%CI:1.2-1.5-P = 0.0001) and wound complications (aOR:1.6, 95%CI:1.2-2.4-P = 0.02) compared to the other anomalies. However, they had less risk for placenta abrupta (aOR:0.6, 95%CI:0.5-0.9-P = 0.02).

Pregnant women with unicomorticate uteri had increased risks of preterm delivery (aOR:1.4, 95%CI:1.1-1.6-P = 0.0001), CD (aOR:3.0, 95%CI:1.6-5.6-P = 0.0001) and SGA (aOR:1.8, 95%CI:1.4-2.3-P = 0.0001) with lower risk of placenta abrupta (aOR:0.5, 95%CI:0.3-0.9-P = 0.03).

Pregnant women with septate uteri had higher risk of chorioamnionitis (aOR:1.5, 95%CI:1.1-2.1-P = 0.048) and CD (aOR:1.4, 95%CI:1.2-1.6-P = 0.0001).

Other pregnancy complications studied which included PPH, the need for hysterectomy, and IUFD had similar rates between the groups (p > 0.05 all).

Limitations, reasons for caution: This is a retrospective analysis utilizing an administrative database that relies on data coding accuracy and consistency.

Wider implications of the findings: There are different risks for certain adverse pregnancy and neonatal outcomes in different uterine anomalies as compared to the other anomalies. Although, regarding many pregnancy complications, risks were similar with different anomalies. Arcuate uterus mostly responds in a similar manner in terms of pregnancy complications as other anomalies.

Trial registration number: NA