



Received: 13 April 2022 | Revised: 15 July 2022 | Accepted: 28 July 2022

DOI: 10.1002/ijgo.14383

**CLINICAL ARTICLE****Obstetrics**

# How adenomyosis changes throughout pregnancy: A retrospective cohort study

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**Abstract**

**Objective:** To study how adenomyosis changes during pregnancy and to possibly correlate these changes to maternal and fetal outcomes.

**Methods:** Retrospective exploratory cohort study including 254 women with a pre-conceptional/first-trimester scan to document adenomyosis and known obstetric outcome. If visible, adenomyosis signs were documented in each trimester and postpartum. Mann-Whitney *U* tests or  $\chi^2$  tests were used for continuous and categorical variables, respectively.

**Results:** A globular uterus was reported in 79% ( $n = 52$ ) of women with adenomyosis in the first trimester, in 38% ( $n = 20$ ) and 2% ( $n = 1$ ) of women in the second and third trimesters, respectively, and postpartum in 77% ( $n = 34$ ) of women. Asymmetrical thickening ( $n = 20$ , 30%) and cysts ( $n = 15$ , 23%) were only visible in 1st trimester. Adenomyosis was associated with miscarriage (odds ratio [OR] 5.9, 95% confidence interval [CI] 2.4–14.9,  $P < 0.001$ ) also in normal conception only (OR 5.1, 95% CI 1.8–14.2,  $P = 0.002$ ) or adjusting for maternal age (adjusted OR 5.9, 95% CI 2.3–15.2,  $P < 0.001$ ). Gestational age at delivery was lower in adenomyosis ( $P = 0.004$ ); the cesarean section rate was higher than in controls (OR 2.5, 95% CI 1.3–4.8,  $P = 0.007$ ) also adjusting for age (adjusted OR 2.07, 95% CI 1.06–4.08,  $P = 0.035$ ).

**Conclusions:** Signs of adenomyosis were visible but progressively disappeared in