

Pregnant and neonatal outcomes in pregnancies with adenomyosis

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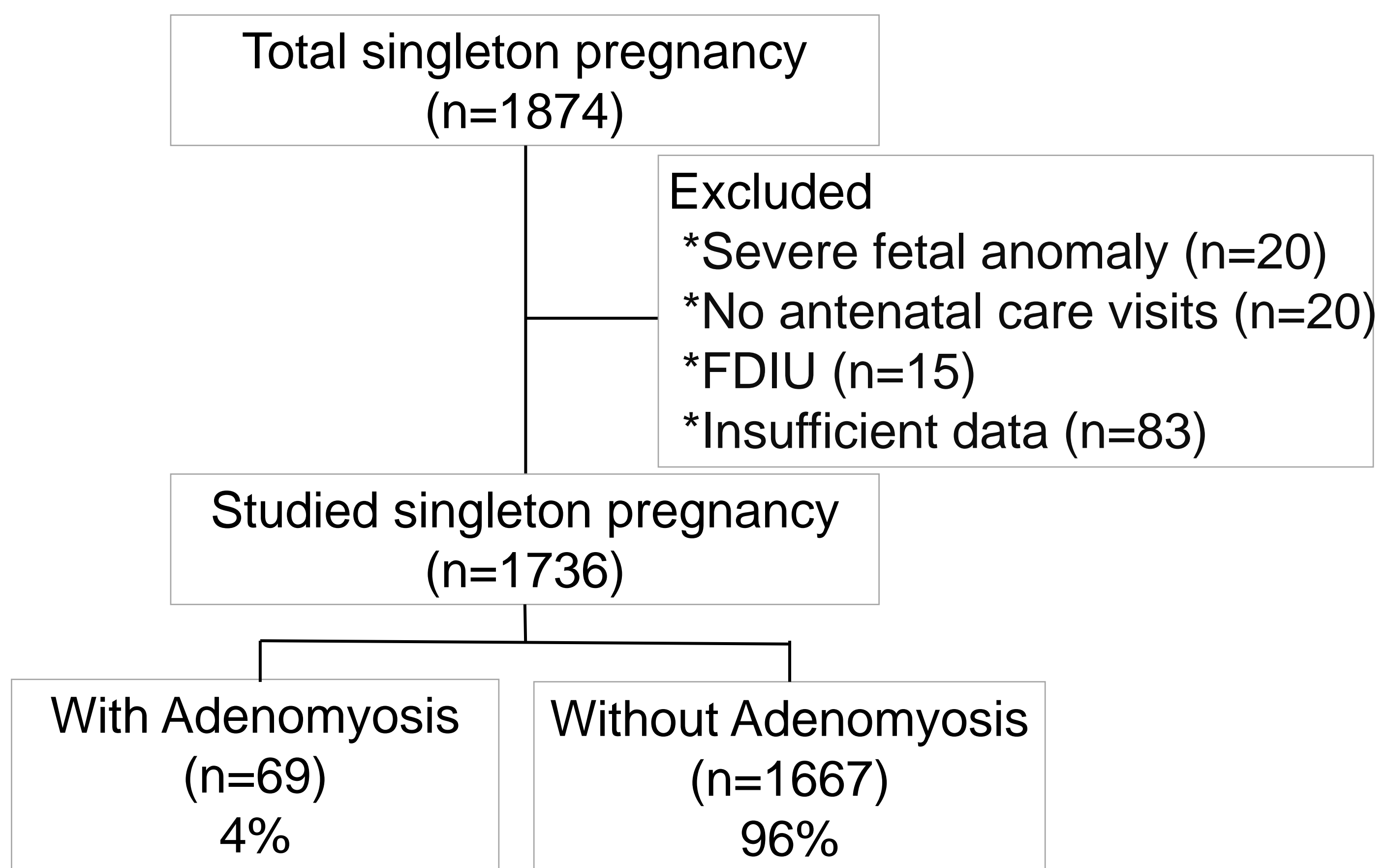
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Objectives

- to evaluate pregnancy outcome in pregnancies complicated with adenomyosis
- to investigate the effect on maternal and neonatal outcomes according to the severity of adenomyosis

Methods

- Retrospective, case-control study
- Study period : 2017.01.01 – 2021.12.31 (5 years)
- Evaluation for
 - Maternal characteristics, maternal and neonatal outcomes between the two groups, pregnancy outcomes according to the severity of adenomyosis



Results

Pregnant women with adenomyosis had significantly higher rates of elderly at pregnancy (72.5%, vs. 46.5%, $P < 0.001$), obesity (36.2% vs. 21.7%, $P = 0.004$), early preterm delivery (<34 weeks) (27.5% vs. 18.1%, $P = 0.04$), malpresentation (21.7% vs. 11.9%, $P = 0.01$), and incompetent internal os of cervix (30.4% vs. 6.2%, $P < 0.001$) compared to pregnant women without adenomyosis. (Table 1)

Pregnant women with severe adenomyosis (wall thickness > 4 cm) had more frequent preterm delivery (65.9% vs. 33.3%, $P = 0.006$), especially in preterm labor (45.5% vs. 10.0%, $P = 0.001$) when compared with non-severe adenomyosis.

Table 1. Maternal characteristics and pregnancy outcomes

	Total group		P-value
	Adenomyosis (n=69)	Control (n=1667)	
Age (year)	36.5 ± 3.5	33.7 ± 4.4	<0.001
Elderly (≥35 years old)	50 (72.5%)	775 (46.5%)	<0.001
Obesity / BMI (kg/m ²) ≥ 25	25 (36.2%)	362 (21.7%)	0.004
Preterm delivery	35 (50.7%)	697 (41.8%)	0.14
Early perterm delivery (<34weeks)	19 (27.5%)	301 (18.1%)	0.04
Malpresentation	15 (21.7%)	199 (11.9%)	0.01
PPH	4 (5.8%)	72 (4.3%)	0.55
GDM	17 (24.6%)	218 (13.1%)	0.006
Preeclampsia	7 (10.1%)	183 (11.0%)	0.82
IUGR	14 (20.3%)	308 (18.5%)	0.71
Preterm labor	20 (29.0%)	346 (20.8%)	0.10
PtPROM	15 (21.7%)	284 (17.0%)	0.31
IIOC	21 (30.4%)	103 (6.2%)	<0.001
Placenta previa	6 (8.7%)	191 (11.5%)	0.47

Table 2. Pregnancy outcomes according to the severity of adenomyosis

	Adenomyosis group		P-value
	≥4cm (n=40)	<4cm(n=29)	
GA at delivery (week)	33.7±4.6	36.3±3.2	0.01
Preterm delivery	29(65.9%)	10(33.3%)	0.006

Neonates born to pregnant women with adenomyosis had worse neonatal outcomes, including earlier gestational age (GA) at delivery, lower birth weight, more frequent respiratory distress syndrome (RDS), and mechanical ventilation. (Table 3)

Neonates born to pregnant women with severe adenomyosis also had worse neonatal outcomes, including more frequent NICU admission, earlier GA at delivery, lower birth weight, more frequent 5-min Apgar score < 7, and more frequent RDS and mechanical ventilation. (Table 4)

Table 3. Neonatal outcomes of adenomyosis and control

	Total group		P-value
	Adenomyosis (n=69)	Control (n=1667)	
Birth weight(g)	2356.4±874.1	2644±802.5	0.003
GA at delivery(weeks)	35.1±4.1	36.4±3.3	0.002
Neonatal complications			
NICU admission	40 (58.0%)	983 (59.0%)	0.86
Neonatal death	2 (2.9%)	18 (1.1%)	0.16
Sepsis, clinical	28 (40.6%)	658 (39.5%)	0.85
Respiratory distress syndrome (RDS)	25 (36.2%)	447 (26.8%)	0.08
Mechanical ventilation	28 (40.6%)	479 (28.7%)	0.03
Intraventricular hemorrhage (IVH)	3 (4.3%)	42 (2.5%)	0.34
Necrotizing enterocolitis (NEC)	1 (1.4%)	27 (1.6%)	0.91

Table 4. Neonatal outcomes according to the severity of adenomyosis

	Adenomyosis group		P-value
	Wall thickness (≥4cm) (n=40)	Wall thickness (<4cm)(n=29)	
Birth weight(g)	2026.4±859.1	2629± 781.5	0.003
GA at delivery(weeks)	33.7±4.6	36.3±3.2	0.01
Neonatal complications			
NICU admission	30(75.0%)	12(41.4%)	0.005
Neonatal death	1 (2.9%)	0	0.37
Sepsis, clinical	22 (57.9%)	8 (27.6%)	0.01
Respiratory distress syndrome (RDS)	19 (50.0%)	7 (24.1%)	0.03
Mechanical ventilation	22 (57.9%)	8 (27.6%)	0.01

CONCLUSION

Adenomyosis → Adverse Maternal outcome

- preterm birth
- Malpresentation
- incompetent internal os of cervix

Wall thickness ≥4cm → Significantly associated with Adverse Maternal outcome

- preterm birth