

Author(s):
Question: KQ1 Appendectomy compared to medical management for appendicitis during pregnancy (any trimester)
Setting:
Bibliography: . [Intervention] for [health problem]. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Certainty assessment							N _e of patients		Effect		Certainty	Importance
N _e of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	KQ1 Appendectomy	medical management	Relative (95% CI)	Absolute (95% CI)		
C-Section												
1	observational studies	serious ^a	not serious	not serious	very serious ^b	none	4/20 (20.0%)	9/34 (26.5%)	OR 0.69 (0.18 to 2.64)	66 fewer per 1,000 (from 204 fewer to 223 more)	⊕○○○ Very low	
Delivery												
1	observational studies	serious ^c	not serious	not serious	very serious ^b	none	0/3 (0.0%)	0/17 (0.0%)	not estimable		⊕○○○ Very low	
Pregnancy loss (total, any gestation)												
3	observational studies	serious ^c	not serious	not serious	very serious ^b	none	4/79 (5.1%)	6/164 (3.7%)	OR 1.32 (0.36 to 4.85)	11 more per 1,000 (from 23 fewer to 119 more)	⊕○○○ Very low	
Preterm Birth												
2	observational studies	serious ^c	not serious	not serious	very serious ^b	none	2/23 (8.7%)	3/51 (5.9%)	OR 1.15 (0.18 to 7.53)	8 more per 1,000 (from 48 fewer to 261 more)	⊕○○○ Very low	
Readmission												
1	observational studies	serious ^a	not serious	not serious	very serious ^b	none	0/20 (0.0%)	3/34 (8.8%)	OR 0.22 (0.01 to 4.48)	67 fewer per 1,000 (from 87 fewer to 214 more)	⊕○○○ Very low	
Sepsis												
1	observational studies	serious ^c	not serious	not serious	very serious ^b	none	10/6701 (0.1%)	4/413 (1.0%)	OR 0.15 (0.05 to 0.49)	8 fewer per 1,000 (from 9 fewer to 5 fewer)	⊕○○○ Very low	

CI: confidence interval; OR: odds ratio

Explanations

- a. This study had an unclear risk of bias on the Newcastle-Ottawa Scale due to uncertainty around the selection of patients and its retrospective nature.
- b. This outcome had a very small sample size and an even smaller event size which increases its fragility.
- c. This study had a high risk of bias on the Newcastle-Ottawa Scale due to concerns around the comparability of groups and reporting of outcomes.

Author(s):

Question: KQ2 Laparoscopic appendectomy compared to open appendectomy for appendicitis during pregnancy (any trimester)

Setting:

Bibliography: . [Intervention] for [health problem]. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Certainty assessment							Nº of patients		Effect		Certainty	Importance
Nº of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	KQ2 Laparoscopic appendectomy	open appendectomy	Relative (95% CI)	Absolute (95% CI)		

C-Section

11	observational studies	serious ^a	not serious	not serious	not serious	none	349/869 (40.2%)	538/1397 (38.5%)	OR 1.10 (0.91 to 1.33)	23 more per 1,000 (from 22 fewer to 69 more)	⊕○○○ Very low	
----	-----------------------	----------------------	-------------	-------------	-------------	------	-----------------	------------------	----------------------------------	--	------------------	--

Delivery

2	observational studies	serious ^b	not serious	not serious	not serious	none	0/23 (0.0%)	1/29 (3.4%)	OR 0.94 (0.03 to 26.65)	2 fewer per 1,000 (from 33 fewer to 453 more)	⊕○○○ Very low	
---	-----------------------	----------------------	-------------	-------------	-------------	------	-------------	-------------	-----------------------------------	---	------------------	--

Neonatal death

6	observational studies	serious ^{a,b}	not serious	not serious	not serious	none	0/133 (0.0%)	0/184 (0.0%)	not pooled	see comment	⊕○○○ Very low	
---	-----------------------	------------------------	-------------	-------------	-------------	------	--------------	--------------	------------	-------------	------------------	--

NICU

1	observational studies	serious ^c	not serious	not serious	not serious	none	1/18 (5.6%)	0/13 (0.0%)	OR 2.31 (0.09 to 61.41)	0 fewer per 1,000 (from 0 fewer to 0 fewer)	⊕○○○ Very low	
---	-----------------------	----------------------	-------------	-------------	-------------	------	-------------	-------------	-----------------------------------	---	------------------	--

Preg loss - all

27	observational studies	serious ^a	not serious	not serious	not serious	none	65/1714 (3.8%)	137/4474 (3.1%)	OR 1.93 (1.39 to 2.70)	27 more per 1,000 (from 11 more to 48 more)	⊕○○○ Very low	
----	-----------------------	----------------------	-------------	-------------	-------------	------	----------------	-----------------	----------------------------------	---	------------------	--

Preg loss - <20

Certainty assessment							N° of patients		Effect		Certainty	Importance
N° of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	KQ2 Laparoscopic appendectomy	open appendectomy	Relative (95% CI)	Absolute (95% CI)		
11	observational studies	serious ^a	not serious	not serious	not serious	none	13/252 (5.2%)	2/273 (0.7%)	OR 3.20 (0.91 to 11.22)	16 more per 1,000 (from 1 fewer to 69 more)	⊕○○○ Very low	

Preg loss - >20

8	observational studies	serious ^a	not serious	not serious	not serious	none	1/205 (0.5%)	1/224 (0.4%)	OR 1.47 (0.15 to 14.52)	2 more per 1,000 (from 4 fewer to 57 more)	⊕○○○ Very low	
---	-----------------------	----------------------	-------------	-------------	-------------	------	--------------	--------------	-----------------------------------	--	------------------	--

Preterm

21	observational studies	serious ^a	not serious	not serious	not serious	none	110/1603 (6.9%)	394/4380 (9.0%)	OR 0.86 (0.55 to 1.35)	12 fewer per 1,000 (from 38 fewer to 28 more)	⊕○○○ Very low	
----	-----------------------	----------------------	-------------	-------------	-------------	------	-----------------	-----------------	----------------------------------	---	------------------	--

Readmit

3	observational studies	serious ^d	not serious	not serious	not serious	none	18/583 (3.1%)	20/511 (3.9%)	OR 0.79 (0.41 to 1.51)	8 fewer per 1,000 (from 23 fewer to 19 more)	⊕○○○ Very low	
---	-----------------------	----------------------	-------------	-------------	-------------	------	---------------	---------------	----------------------------------	--	------------------	--

Sepsis

2	observational studies	serious ^a	not serious	not serious	not serious	none	7/1441 (0.5%)	7/900 (0.8%)	OR 0.58 (0.20 to 1.69)	3 fewer per 1,000 (from 6 fewer to 5 more)	⊕○○○ Very low	
---	-----------------------	----------------------	-------------	-------------	-------------	------	---------------	--------------	----------------------------------	--	------------------	--

CI: confidence interval; OR: odds ratio

Explanations

- Included studies with a high risk of bias on the Newcastle-Ottawa scale due to comparability of the groups.
- Included studies with an unclear risk of bias on the Newcastle-Ottawa scale due to potential biases in the selection of patients and comparability of groups.
- Included studies with an unclear risk of bias on the Newcastle-Ottawa scale due to potential biases in the selection of patients.
- Included studies with an unclear risk of bias on the Newcastle-Ottawa scale due to potential biases in the comparability of groups.

Author(s):

Question: KQ3 Cholecystectomy compared to Medical Treatment for biliary disease in pregnancy

Setting:

Bibliography: . [Intervention] for [health problem]. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Cholecystectomy	Medical Treatment	Relative (95% CI)	Absolute (95% CI)		
Bile leak												
6	observational studies	serious ^a	not serious	not serious	serious ^b	none	4/599 (0.7%)	294/22702 (1.3%)	OR 1.06 (0.17 to 6.53)	1 more per 1,000 (from 11 fewer to 66 more)	⊕○○○ Very low	
C-Section												
9	observational studies	serious ^a	not serious	not serious	serious ^b	none	443/3249 (13.6%)	10699/28367 (37.7%)	OR 0.87 (0.36 to 2.10)	32 fewer per 1,000 (from 198 fewer to 183 more)	⊕○○○ Very low	
C-Section - Cholecystitis only												
1	observational studies	not serious	not serious	not serious	not serious	none	147/2440 (6.0%)	984/3950 (24.9%)	OR 0.19 (0.16 to 0.23)	190 fewer per 1,000 (from 199 fewer to 178 fewer)	⊕⊕○○ Low	
Delivery during admission												
3	observational studies	serious ^a	not serious	not serious	serious ^b	none	7/47 (14.9%)	30/133 (22.6%)	OR 0.60 (0.22 to 1.67)	77 fewer per 1,000 (from 165 fewer to 102 more)	⊕○○○ Very low	
IUGR												
4	observational studies	serious ^a	serious ^c	not serious	serious ^b	none	20/2508 (0.8%)	108/4079 (2.6%)	OR 1.28 (0.12 to 13.29)	7 more per 1,000 (from 23 fewer to 239 more)	⊕○○○ Very low	
IUGR - Cholecystitis only												
1	observational studies	not serious	not serious	not serious	not serious	none	14/2440 (0.6%)	104/3950 (2.6%)	OR 0.21 (0.12 to 0.37)	21 fewer per 1,000 (from 23 fewer to 16 fewer)	⊕⊕○○ Low	
Neonatal death												
3	observational studies	serious ^a	not serious	not serious	serious ^b	none	0/86 (0.0%)	2/141 (1.4%)	OR 0.94 (0.04 to 20.73)	1 fewer per 1,000 (from 14 fewer to 216 more)	⊕○○○ Very low	

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Cholecystectomy	Medical Treatment	Relative (95% CI)	Absolute (95% CI)		
NICU												
2	observational studies	serious ^a	not serious	not serious	serious ^b	none	0/32 (0.0%)	16/88 (18.2%)	OR 0.20 (0.02 to 1.74)	139 fewer per 1,000 (from 177 fewer to 97 more)	⊕○○○ Very low	
Pre-eclampsia												
4	observational studies	serious ^a	serious ^c	not serious	not serious	none	234/2944 (7.9%)	790/26503 (3.0%)	OR 1.94 (0.47 to 8.04)	26 more per 1,000 (from 16 fewer to 168 more)	⊕○○○ Very low	
Pre-eclampsia - Cholecystitis only												
1	observational studies	not serious	not serious	not serious	not serious	none	224/2440 (9.2%)	603/3950 (15.3%)	OR 0.56 (0.48 to 0.66)	61 fewer per 1,000 (from 73 fewer to 46 fewer)	⊕⊕○○ Low	
Preg loss - all												
7	observational studies	serious ^a	not serious	not serious	serious ^b	none	15/2562 (0.6%)	39/4194 (0.9%)	OR 0.70 (0.39 to 1.25)	3 fewer per 1,000 (from 6 fewer to 2 more)	⊕○○○ Very low	
Preg loss - all - Cholecystitis only												
1	observational studies	not serious	not serious	not serious	serious ^b	none	14/2440 (0.6%)	37/3950 (0.9%)	OR 0.61 (0.33 to 1.13)	4 fewer per 1,000 (from 6 fewer to 1 more)	⊕○○○ Very low	
Preg loss - <20												
4	observational studies	serious ^a	not serious	not serious	serious ^b	none	2/116 (1.7%)	2/224 (0.9%)	OR 2.30 (0.33 to 16.18)	11 more per 1,000 (from 6 fewer to 118 more)	⊕○○○ Very low	
Preg loss - >20												
4	observational studies	serious ^a	not serious	not serious	serious ^b	none	1/101 (1.0%)	1/186 (0.5%)	OR 3.87 (0.39 to 38.66)	15 more per 1,000 (from 3 fewer to 167 more)	⊕○○○ Very low	
Preterm												
10	observational studies	serious ^a	serious ^c	not serious	serious ^b	none	366/3978 (9.2%)	3126/35130 (8.9%)	OR 1.77 (0.73 to 4.30)	58 more per 1,000 (from 22 fewer to 207 more)	⊕○○○ Very low	

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Cholecystectomy	Medical Treatment	Relative (95% CI)	Absolute (95% CI)		
Preterm - Cholecystitis only												
1	observational studies	not serious	not serious	not serious	not serious	none	91/2440 (3.7%)	397/3950 (10.1%)	OR 0.35 (0.27 to 0.44)	63 fewer per 1,000 (from 71 fewer to 54 fewer)	⊕⊕○○ Low	
Readmit												
7	observational studies	serious ^a	not serious	not serious	not serious	none	321/3216 (10.0%)	1984/28230 (7.0%)	OR 0.39 (0.15 to 0.98)	42 fewer per 1,000 (from 59 fewer to 1 fewer)	⊕○○○ Very low	
Readmit - Cholecystitis only												
1	observational studies	not serious	not serious	not serious	not serious	none	262/2440 (10.7%)	739/3950 (18.7%)	OR 0.52 (0.45 to 0.61)	80 fewer per 1,000 (from 93 fewer to 64 fewer)	⊕⊕○○ Low	
Sepsis												
3	observational studies	serious ^a	not serious	not serious	serious ^b	none	85/2833 (3.0%)	86/4844 (1.8%)	OR 1.66 (1.11 to 2.47)	11 more per 1,000 (from 2 more to 25 more)	⊕○○○ Very low	
Sepsis - Cholecystitis only												
1	observational studies	not serious	not serious	not serious	not serious	none	77/2440 (3.2%)	69/3950 (1.7%)	OR 1.83 (1.32 to 2.55)	14 more per 1,000 (from 5 more to 26 more)	⊕⊕○○ Low	

CI: confidence interval; OR: odds ratio

Explanations

- Some of the included studies which contributed significantly to the overall effect size were deemed to be at a high risk of bias on the Newcastle-Ottawa scale due to comparability.
- There was a wide range of effects that crosses several clinically relevant thresholds.
- There was serious inconsistency between some of the included studies, with non-overlapping confidence intervals.