

Comparison 1: Intermittent monitoring with Doppler ultrasound device compared with routine Pinard fetal stethoscope

Source: Martis R, Emilia O, Nurdiati DS, Brown J. Intermittent auscultation (IA) of fetal heart rate in labour for fetal well-being. Cochrane Database Syst Rev. 2017;(2):CD008680.

No. of studies	Study design	Risk of bias	Quality assessment				Other considerations	No. of participants		Effect		Certainty (GRADE)	Importance
			Inconsistency	Indirectness	Imprecision			Doppler	Pinard	Relative (95% CI)	Absolute (95% CI)		
Caesarean section													
2	RCTs	not serious	serious ^a	serious ^b	serious ^c	none	251/1304 (19.2%)	212/1294 (16.4%)	RR 1.29 (0.81-0.05)	48 more per 1000 (from 31 fewer to 172 more)	⊕○○○ VERY LOW	critical	
Caesarean section for fetal distress													
1	RCT	not serious	not serious	serious ^b	not serious	none	51/312 (16.3%)	19/315 (6.0%)	RR 2.71 (1.64-4.48)	103 more per 1000 (from 39 more to 210 more)	⊕⊕⊕○ MODERATE	critical	
Instrumental vaginal birth													
1	RCT	not serious	not serious	serious ^b	serious ^c	none	28/312 (9.0%)	21/315 (6.7%)	RR 1.35 (0.78-2.32)	23 more per 1000 (from 15 fewer to 88 more)	⊕⊕○○ LOW	critical	
Fetal heart rate abnormality detected													
2	RCTs	not serious	serious ^a	serious ^b	not serious	none	175/1304 (13.4%)	74/1294 (5.7%)	RR 2.40 (1.09-5.29)	80 more per 1000 (from 5 more to 245 more)	⊕⊕○○ LOW	critical	
Early and late fetal heart rate decelerations detected													
1	RCT	not serious	not serious	serious ^b	not serious	none	62/312 (19.9%)	23/315 (7.3%)	RR 2.72 (1.73-4.28)	126 more per 1000 (from 53 more to 239 more)	⊕⊕⊕○ MODERATE	critical	
Hypoxic ischaemic encephalopathy													
1	RCT	not serious	not serious	serious ^b	serious ^d	none	1/312 (0.3%)	10/315 (3.2%)	RR 0.10 (0.01-0.78)	29 fewer per 1000 (from 7 fewer to 31 fewer)	⊕⊕○○ LOW	critical	
Admission to neonatal intensive care unit/neonatal unit													
2	RCTs	not serious	serious ^a	serious ^b	serious ^c	none	82/1304 (6.3%)	93/1294 (7.2%)	RR 0.89 (0.41-1.91)	8 fewer per 1000 (from 42 fewer to 65 more)	⊕○○○ VERY LOW	critical	
Seizures in the neonatal period													
1	RCT	not serious	not serious	serious ^b	serious ^d	none	0/312 (0.0%)	9/315 (2.9%)	RR 0.05 (0.00-0.91)	27 fewer per 1000 (from -- to 3 fewer)	⊕⊕○○ LOW	critical	

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			Inconsistency	Indirectness	Imprecision	Other considerations	Doppler	Pinard	Relative (95% CI)	Absolute (95% CI)		
Perinatal mortality												
2	RCTs	not serious	serious ^a	serious ^b	very serious ^{c,d}	none	13/1304 (1.0%)	15/1293 (1.2%)	RR 0.69 (0.09-5.40)	4 fewer per 1000 (from 11 fewer to 51 more)	⊕○○○ VERY LOW	critical
Apgar < 7 at 5 minutes after birth												
2	RCTs	not serious	serious ^a	serious ^b	serious ^c	none	26/1304 (2.0%)	26/1294 (2.0%)	RR 0.76 (0.20-2.87)	5 fewer per 1000 (from 16 fewer to 38 more)	⊕○○○ VERY LOW	critical

CI: confidence interval; MD: mean difference; RCT: randomized controlled trial; RR: risk ratio.

^a Severe unexplained heterogeneity.

^b One study included high-risk pregnancies.

^c Wide confidence interval crossing the line of no effect.

^d Small sample size and/or few events.