

Perinatal outcomes of Parvovirus B19 infection in pregnancy: systematic review and meta-analysis

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OBJECTIVES: To evaluate the fetal and perinatal outcomes of Parvovirus B19 infection in pregnancy, focusing on the differences between characteristics of the current disease outbreak observed in 2023-2024 and the previous waves.

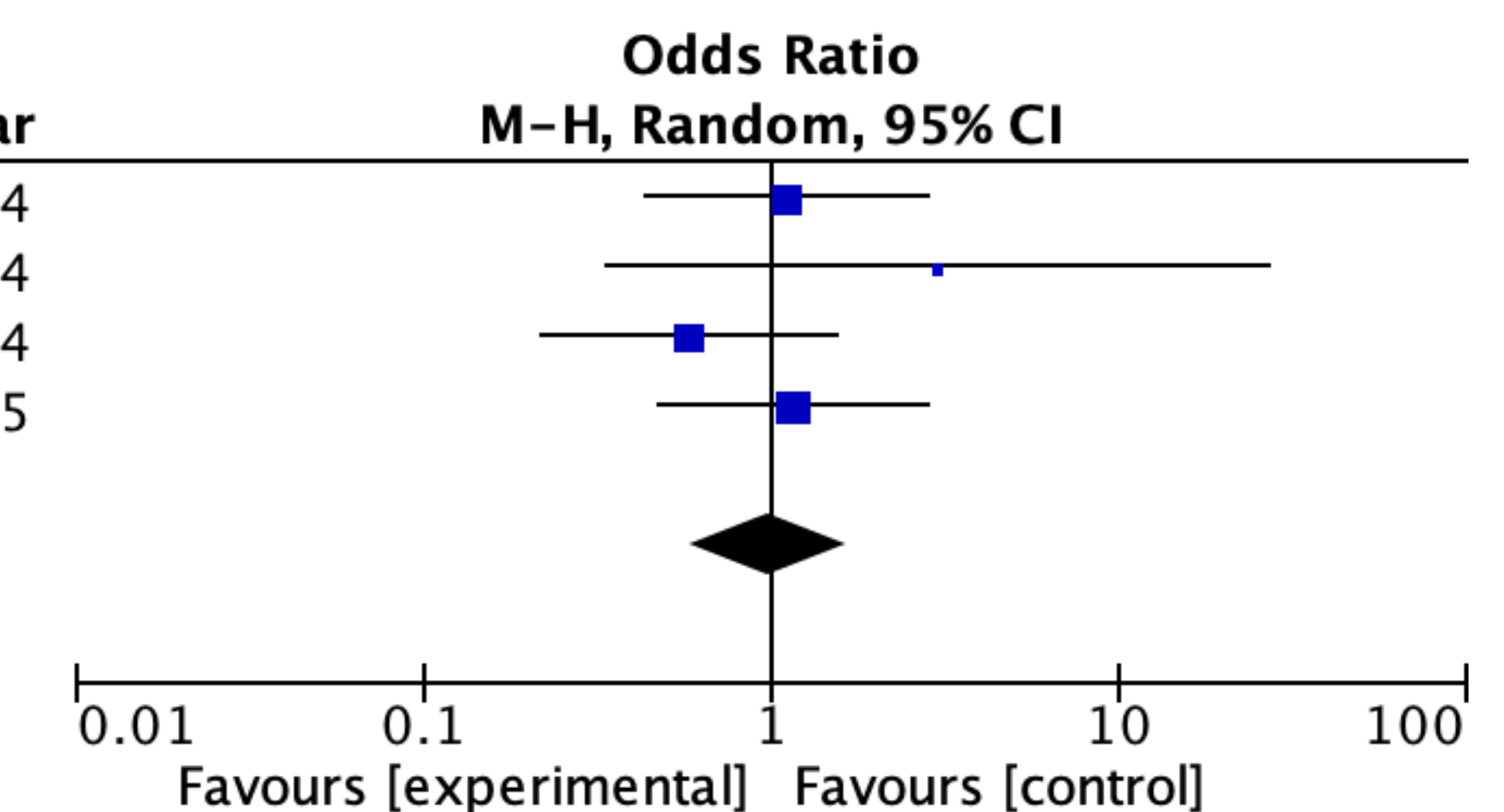
METHODS: MEDLINE, EMBASE, Scopus, and CINHAL databases were searched up to December 2024. We performed a meta-analysis of pooled proportions using a random-effect model. All outcomes were described in the overall cohort, and a subgroup analysis was performed comparing cases from the most recent wave (2023-2024) and older cases.

RESULTS: Forty-two studies were included. The rate of intrauterine demise among cases of fetal infection was 29.2% (95% CI 21.6-36.8), whereas the rate of demise among cases of maternal infection was lower (6.5%, 95% CI 4.7-8.3). The rate of termination of pregnancy in cases of fetal infection was 4.7% (95% CI 0.7-8.8). Intrauterine transfusion was performed in 36.7% of cases (95% CI 20.5-53.0) of fetal infections, and in 20.2% of cases of maternal infection (95% CI 5.7-34.8).

No significant difference was observed in the rate of fetal demise (OR 0.92, 95% CI 0.47-1.80, $p=0.80$) or ultrasound signs of fetal anaemia (OR 1.08, 95% CI 0.69-1.70, $p=0.73$) between the recent and the previous waves. The rate of IUTs was higher in the most recent wave, however statistical significance was not reached (OR 2.23, 95% CI 0.78-6.37, $p=0.13$).

IUD among maternal infections

Study or Subgroup	New wave		Old wave		Weight	Odds Ratio		Year
	Events	Total	Events	Total		M-H, Random, 95% CI		
Prasad 2024	11	175	8	140	30.9%	1.11 [0.43, 2.83]	2024	
Tassis 2024	5	58	1	33	5.7%	3.02 [0.34, 27.01]	2024	
Nordholm 2024	5	130	28	435	28.8%	0.58 [0.22, 1.54]	2024	
Jimenez Cruz 2025	10	426	10	492	34.7%	1.16 [0.48, 2.81]	2025	
Total (95% CI)		789		1100	100.0%	0.99 [0.59, 1.67]		
Total events	31		47					
Heterogeneity: Tau ² = 0.00; Chi ² = 2.32, df = 3 (P = 0.51); I ² = 0%								
Test for overall effect: Z = 0.04 (P = 0.97)								



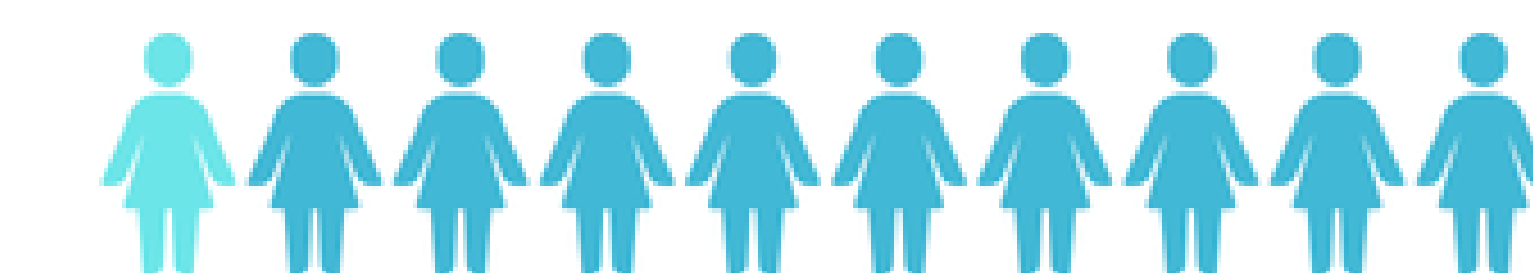
IUD among fetal infections

29.2 (95% CI 21.6-36.8)



IUD among maternal infections

6.0 (95% CI 3.6-8.4)



NND among fetal infections

10.2 (95% CI 3.0-17.1)



NND among maternal infections

2.1 (95% CI 2.0-6.0)



US sings of anaemia among fetal infections

68.0 (95% CI 56.8-79.2)

