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Beyond neonatal seizures - epileptic evolution in preterm newborns: a systematic review and meta-analysis

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Epileptic **Disorders**

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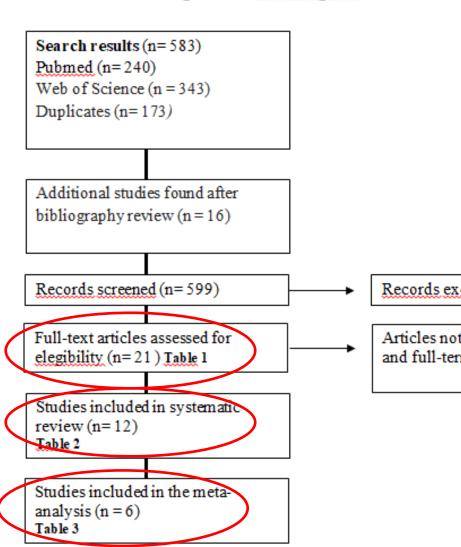


Figure 1: Flowdiagram of search strategy

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Records excluded (n= 426)

Articles not extended to both preterm and full-term patients (n = 9)

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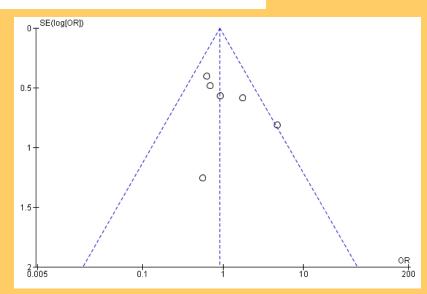
Results



	Pre PNE		Term PNE		Odds Ratio		Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% Cl	M-H, Fixed, 95% CI
Glass 2017	3	12	5	75	2.6%	4.67 [0.95, 22.90]	
Gracias Da Silva 2004	12	44	31	83	39.8%	0.63 [0.28, 1.40]	
Hellstrom 1995	1	27	2	31	4.6%	0.56 [0.05, 6.52]	
Pisani 2007	9	51	13	55	26.3%	0.69 [0.27, 1.79]	
Pisani 2012b	7	41	8	44	16.3%	0.93 [0.30, 2.83]	
Ronen 2007	6	26	9	62	10.4%	1.77 [0.56, 5.60]	- +
Total (95% CI) Total events	38	201	68	350	100.0%	0.92 [0.58, 1.44]	▲
Heterogeneity: Chi ² = 6.61, df = 5 (P = 0.25); l ² = 24%							
Test for overall effect: Z =	0.38 (P =	: 0.70)					Favours [Preterm] Favours[Term]

Only six publications presented complete data on PNE in preterm (n = 201) and full-term (n = 350) infants that were suitable for meta-analysis.





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Limits of our study



- Not all papers describe the type or duration of seizures.
- The diagnosis is electroclinical; only two papers used video-EEG.
- In many studies, the gestational age or details of prematurity in infants with convulsions or those with PNE was not specified.
- The type of epilepsy, treatment, follow-up were not specified.
- Comorbidities, and how they were diagnosed (tests, follow-up), were not described uniformly.

Conclusions

There does not appear to be any significant difference in the incidence of PNE between the two populations. However, we hope that our study may be a starting point for further research.

