AIM
STB

ASSOCIATION INTERNATIONALE
POUR UNE MÉDECINE SCIENTIFIQUE
INDÉPENDANTE ET BIENVEILLANTE

Vaccin hépatite B et SEP / démyélinisations centrales

08/05/2019

Introduction

Il existe en France une défiance inquiétante à l'égard de la vaccination, qui se traduit par une couverture insuffisante pour certains vaccins, susceptible de conséquences infectieuses graves.

[...]

La vaccination est, à côté de l'hygiène publique, un pilier historique de l'action de santé publique contre les maladies infectieuses.

[...]

[c'est] « une avancée majeure en matière de santé, un droit à la prévention individuelle, mais aussi un devoir de prévention collective.»

La dernière méta-analyse

Principe d’une « méta-analyse »

- Revue de la littérature
- Analyse statistique et pooling
- Conclusion ?

Problématiques :

- Qualité des études intégrées
- Hétérogénéité des données
- Biais de publication

Stratégie des industriels : inonder les revues de publications très rassurantes pour fabriquer le consensus (efficacité / tolérance)

Exemple : seeding trials → essais à seul objectif marketing mais non présentés comme tels (estimation : 20 % / 1 essai sur 5 *)

- **Quand les résultats sont mauvais on ne publie pas**
- **Au pire on falsifie les données (Thompson → ROR / autisme ; Merck → M-M-R-II / valence oreillons ; efficacité Cervarix - 3 cancers vaccinées vs. 1 contrôles ; reporting AEs essais anti HPV…)**

* https://blogs.biomedcentral.com/on-medicine/2016/01/21/clinical-drug-trials-marketing-science/

Chronique d'une méta-analyse

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Hepatitis B vaccination and the putative risk of central demyelinating diseases – A systematic review and meta-analysis

Julie Mouchet [a,*], Francesco Salvo [a], Emanuel Raschi [b], Elisabetta Poluzzi [b], Ippazio Cosimo Antonazzo [b], Fabrizio De Ponti [b], Bernard Bégaud [a]

[a] Univ. Bordeaux, Inserm, Bordeaux Population Health Research Center, Team Pharmacoepidemiology, UMR 1219, F-33000 Bordeaux, France
[b] Department of Medical and Surgical Sciences, University of Bologna, Bologna, Italy

Vaccine. 2018 Mar 14;36(12):1548-1555. doi: 10.1016/j.vaccine.2018.02.036. Epub 2018 Feb 15.

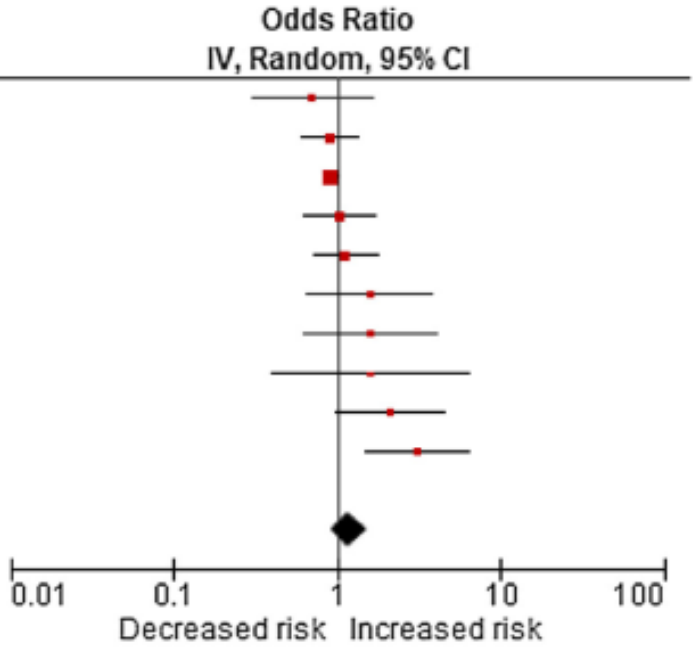
Chronique d'une méta-analyse

A/ Outcome: multiple sclerosis

Study or Subgroup	log[Odds Ratio]	SE	Weight	Odds Ratio IV, Random, 95% CI
Ascherio 2001	-0.3567	0.4323	6.3%	0.70 [0.30, 1.63]
DeStefano 2003	-0.1054	0.2069	14.7%	0.90 [0.60, 1.35]
Ramagopalan 2009	-0.0834	0.0464	23.9%	0.92 [0.84, 1.01]
Mikaeloff 2007	0.0296	0.259	12.0%	1.03 [0.62, 1.71]
Langer-Gould 2014	0.1133	0.2254	13.7%	1.12 [0.72, 1.74]
Hocine 2007	0.4637	0.4486	5.9%	1.59 [0.66, 3.83]
Sturkenboom 1999	0.47	0.4755	5.4%	1.60 [0.63, 4.06]
Touzé 2002	0.47	0.7073	2.8%	1.60 [0.40, 6.40]
Mikaeloff 2009	0.7514	0.3834	7.5%	2.12 [1.00, 4.49]
Hernan 2004	1.1314	0.3704	7.8%	3.10 [1.50, 6.41]
Total (95% CI)			**100.0%**	**1.19 [0.93, 1.52]**

Heterogeneity: Tau² = 0.06; Chi² = 19.24, df = 9 (P = 0.02); I² = 53%

Test for overall effect: Z = 1.37 (P = 0.17)



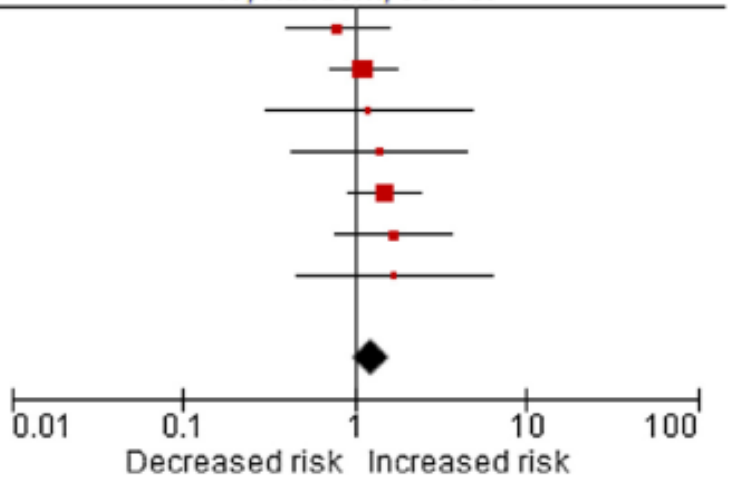
Chronique d'une méta-analyse

B/ Outcome: central demyelination

Study or Subgroup	log[]	SE	Weight	IV, Random, 95% CI
DeStefano 2003	-0.2231	0.3537	13.8%	0.80 [0.40, 1.60]
Langer-Gould 2014	0.1133	0.2254	34.1%	1.12 [0.72, 1.74]
Zipp 1999	0.1823	0.7073	3.5%	1.20 [0.30, 4.80]
Touzé 2002	0.3365	0.6023	4.8%	1.40 [0.43, 4.56]
Mikaeloff 2009	0.4055	0.2439	29.1%	1.50 [0.93, 2.42]
Hocine 2007	0.5188	0.398	10.9%	1.68 [0.77, 3.67]
Touzé 2000	0.5306	0.6669	3.9%	1.70 [0.46, 6.28]
Total (95% CI)			**100.0%**	**1.25 [0.97, 1.62]**

Heterogeneity: Tau² = 0.00; Chi² = 3.19, df = 6 (P = 0.78); I² = 0%

Test for overall effect: Z = 1.71 (P = 0.09)



Ramagopalan 2009

Étude de qualité douteuse

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Association of infectious mononucleosis with multiple sclerosis. A population-based study. ; Neuroepidemiology. 2009;32(4):257-62. doi: 10.1159/000201564. Epub 2009 Feb 11.

Étude de qualité douteuse

- Étude canadienne sur la SEP : 14,362 cas et 7,671 témoins

Specific to this study, all MS index cases were asked whether or not they had suffered from selected viral diseases as a child and whether they had received certain vaccines during early life.

Étude faite sur questionnaire sans même demander l'antécédence de la maladie infectieuse ou du vaccin par rapport à la survenue de la SEP

Interviewees were asked to respond to questions regarding clinical infection or vaccination history with a choice of three responses: 'yes', 'no' or 'unknown'.

Étude de qualité douteuse

Our study does have limitations. As infectious mononucleosis was not asked about specifically, and the fact that MS index cases and spousal controls are being asked about infectious diseases/vaccinations that occurred decades previously means that information collected is liable to reporting and recall bias. Nevertheless, the data obtained in this study shows striking similarity to previous observations.

- Biais de mémorisation (« decades » ?!?!)
- **Antécédence de la cause présumée non contrôlée**
- Contrôle administratif de l'exposition ? non
- Vacciné avec quel produit ? on ne sait pas
- Durée de survenue des symptômes post vaccin ? on ne sait pas non plus

Résultats

	p value	Odds ratio	95% CI
Mumps	0.62	0.98	0.92–1.05
Mumps vaccine	0.02[a]	1.09	1.01–1.17
Measles	0.47	0.97	0.91–1.05
Measles vaccine	0.04[a]	1.08	1.00–1.16
Rubella	0.06	0.93	0.87–1.00
Rubella vaccine	0.03[a]	1.09	1.00–1.17
Influenza vaccine	0.52	1.02	0.96–1.09
Hepatitis B vaccine	0.07	0.92	0.84–1.01
Varicella	0.06	1.07	1.00–1.14
Infectious mononucleosis	<0.001	2.06	1.71–2.48

CI = Confidence interval.
[a] Not significant after correction for multiple testing.

MULTIPLE SCLEROSIS ONSET IN ADULTS

Two controlled studies (**Ramagopalan et al., 2009**; Touze et al., 2002) **had very serious methodological limitations that precluded their inclusion in this assessment**. Ramagopalan et al. (2009) did not attempt to validate self-reported vaccination data or confirm the timing of vaccination, and the choice of spousal controls could have introduced selection bias.

Adverse Effects of Vaccines: Evidence and Causality
ISBN 978-0-309-21435-3
Kathleen Stratton, Andrew Ford, Erin Rusch, and Ellen Wright Clayton, Editors;
Committee to Review Adverse Effects of Vaccines; Institute of Medicine

ça méritait bien 24 % dans le pooling...

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Conclusion

Désormais soyez prudents lorsque vous lirez des méta-analyses ou des recommandations officielles.

Fin