29e Journée de Pathologie Infectieuse Pédiatrique Ambulatoire



Réactions précoces aux primo-vaccinations du Nourrisson

J.Gaudelus
F. Thollot
R.Cohen

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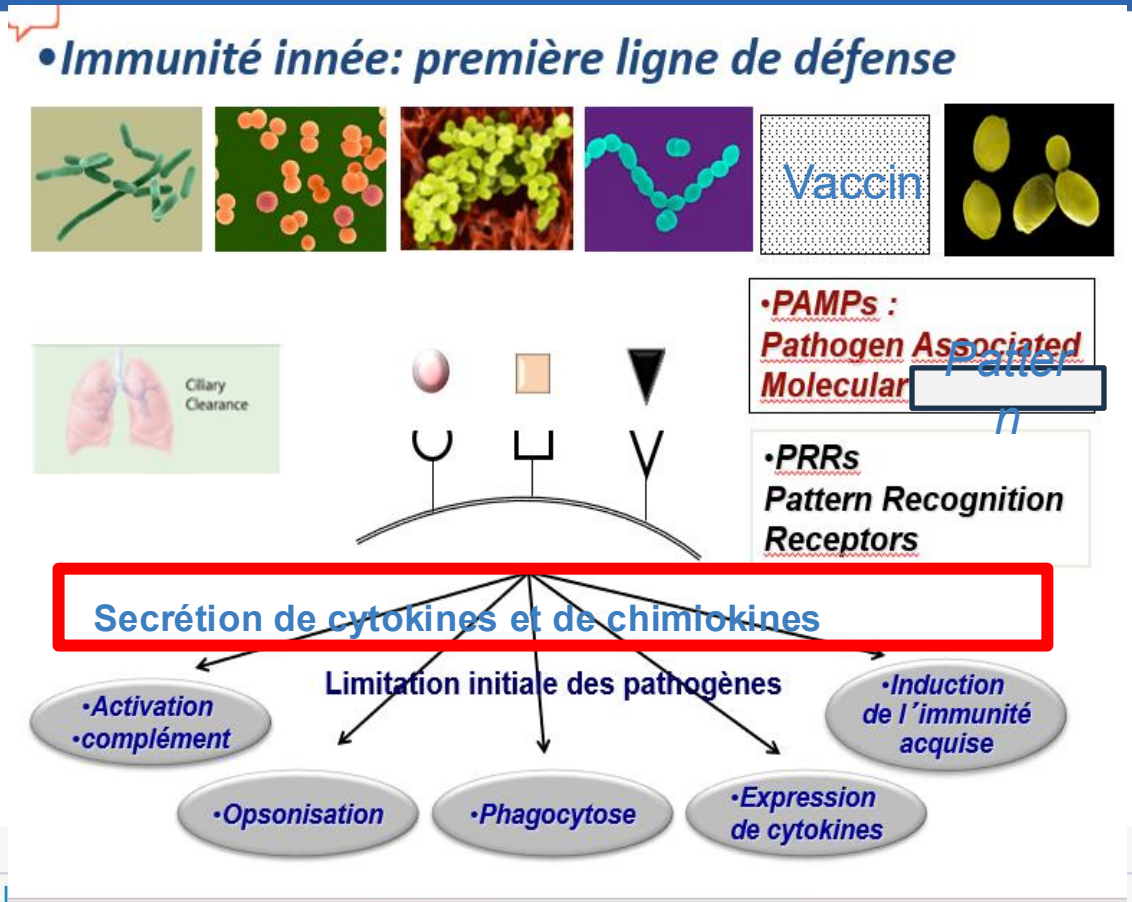
Avec le soutien des associations

ACTIV · GPIP · AFPA Association Française de Pédiatrie Ambulatoire · INFOVAC-FRANCE

Médecine & enfance

sous la direction scientifique du Pr Robert Cohen
avec Infovac-France,
l'Association clinique et thérapeutique infantile du Val-de-Marne (ACTIV),
le Groupe de pathologie infectieuse pédiatrique (GPIP),
l'Association française de pédiatrie ambulatoire (AFPA),
et la revue Médecine & enfance

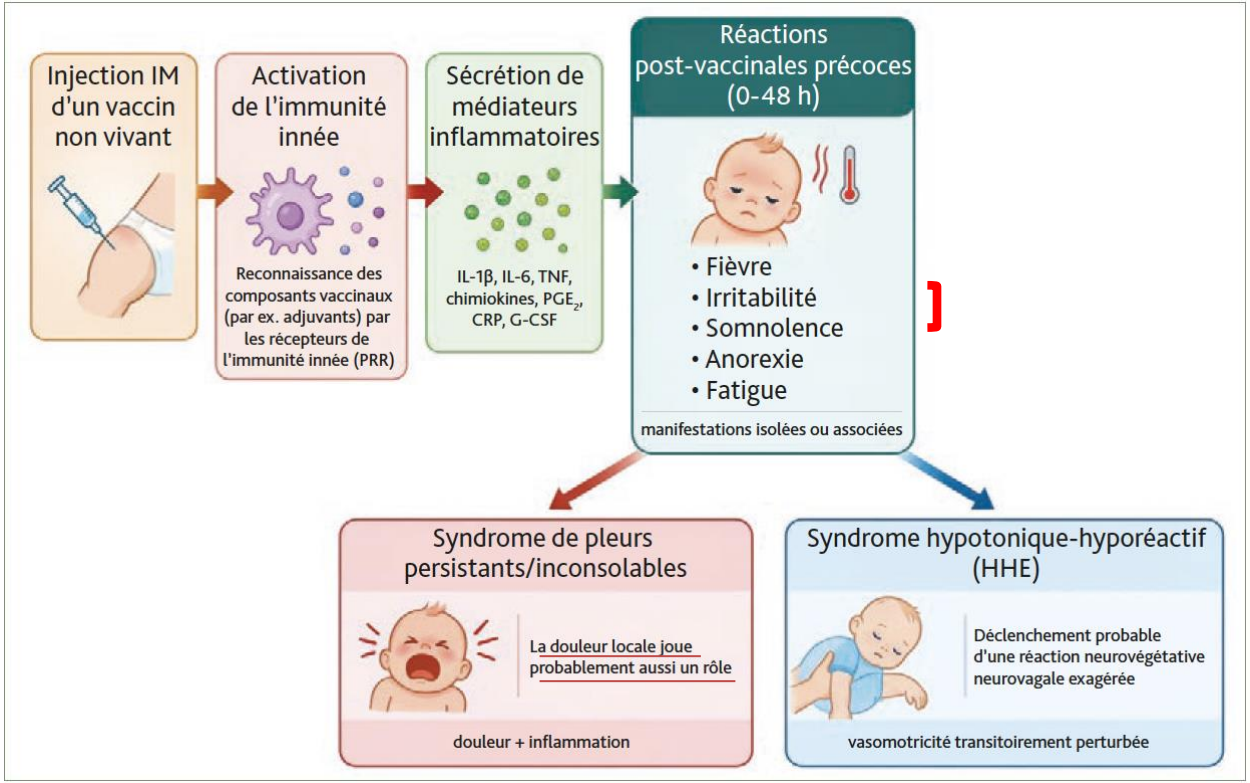
Immunité Innée



DAMs :
Damaged Associated Molecular Pattern

IL1, IL6, TNF, PGE2… CRP

Réactogénicité précoce après un vaccin non vivant chez le nourrisson



Pas de relation entre la hauteur de la fièvre et les autres symptômes

Que proposer pour tenter de prévenir ?

Hexa+PCV

Rose et al. BMC Pediatrics 2013, 13:98
http://www.biomedcentral.com/1471-2431/13/98

BMC Pediatrics

RESEARCH ARTICLE Open Access

An open-label randomized clinical trial of prophylactic paracetamol coadministered with 7-valent pneumococcal conjugate vaccine and hexavalent diphtheria toxoid, tetanus toxoid, 3-component acellular pertussis, hepatitis B, inactivated poliovirus, and *Haemophilus influenzae* type b vaccine

Paracetamol

150 enfants par groupe, voie rectale

A éviter pour la 1ère dose « pour tous »
réduction de l'immunogénicité

Table 4 Systemic events within 4 days of PCV-7 and DTPa-HBV-IPV/Hib vaccination –safety population

Systemic event	Dose	Prophylaxis group % (n/N)	Control group % (n/N)	p-value*
Persistent inconsolable crying	Dose 1	9.5 (11/116)	20.0 (26/130)	0.031
	Dose 2	9.3 (11/118)	15.8 (19/120)	0.171
	Dose 3	14.0 (15/107)	15.3 (17/111)	0.849
	Toddler dose	7.8 (7/90)	17.1 (18/105)	0.056

Local reactions after PCV-7 and DTPa-HBV-IPV/Hib

The majority of local reactions were mild or moderate in severity. The incidence of local reactions increased after the toddler dose. Local reactions were less frequent in the prophylaxis group; however, statistical significance

Systemic reactions

Systemic reactions were generally less frequent in the prophylaxis group with significant differences noted for fever, rash, irritability, drowsiness, decreased appetite, persistent inconsolable crying, and decreased activity after at least one dose in the infant series (all $p < 0.05$).

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Pleurs persistants / "unusual crying" après vaccination — données de réactive

Que proposer pour tenter de prévenir ?

Paracetamol

Bexsero®

Pas de réduction de l'immunogénicité

RESEARCH PAPER
Human Vaccines & Immunotherapeutics 10:7, 1993–2004; July 2014; © 2014 Landes Bioscience

A phase 2 randomized controlled trial of a multicomponent meningococcal serogroup B vaccine (I)

Effects of prophylactic paracetamol on immunogenicity and reactogenicity of routine infant vaccines and 4CMenB

Roman Prymula[1,2,*], Susanna Esposito[3], Gian Vincenzo Zuccotti[4,5], Fang Xie[6], Daniela Toneatto[6], Igor Kohl[6], and Peter M Dull[6]

Our results from part of a phase 2, randomized, clinical trial show that prophylactic paracetamol in infants decreases fever and reactogenicity with no apparent clinically relevant impact on immune responses to the multicomponent meningococcal serogroup B vaccine (4CMenB), nor the concomitantly administered routine vaccinations (DTaP-HBV-IPV/Hib and PCV7). The administration of oral paracetamol at the time of vaccination, with 2 subsequent doses at 4–6 h intervals, significantly reduced the incidence of febrile reactions ≥38.5 °C over 7 d post-vaccination, and fewer infants experienced solicited local reactions.

Characteristics of Hypotonic–Hyporesponsive Episodes (HHEs) Following Childhood Vaccination: A 13-Year Analysis of Spontaneous Reports to the Dutch Pharmacovigilance Centre Lareb

Sanne Boetzkes [1], Leontine van Balveren [1] and Florence van Hunsel [1,2,*]

Etude rétrospective 2012-2025

294 cas (critères de la Brighton collaboration level 1)

Nombre estimé de vaccinations pendant la période : 19 millions

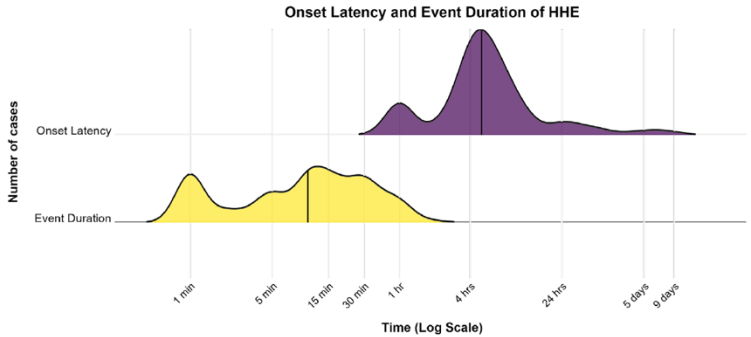
Âge médian : 9 semaines (5-68)

T de latence médian : 5h (4-8)

Durée médiane de l'épisode : 10 mn (3-30)

Deux seulement après une seconde dose

Récupération complète, aucune séquelle



L'inflammation post vaccinale augmente la réactivité du SN autonome, effet vasomoteur

HHE risque de récidive ?

Journal of Paediatrics and Child Health
RACP Specialists. Together

Vaccination of children following a previous hypotonic–hyporesponsive episode

H Goodwin, M Nash, M Gold, TC Heath, MA Burgess

2002

66 enfants HHE (63 coq germes entiers ; 3 coq aC
Revaccinés (55 coq acellulaire ; 4 germes entiers)
Pas de récidive

Risk of Recurrence of Adverse Events Following Immunization: A Systematic Review

Joseline Guetsop Zafack, MD, MPH,[a] Gaston De Serres, MD, PhD,[a,b,c] Marilou Kiely, RN, MSc,[a,c] Marie-Claude Gariépy, MSc,[b] Isabelle Rouleau, PhD,[d] Karina Anne-Marie Top, MD, MSc,[e] for the Canadian Immunization Research Network

Zafack JG et al Pediatrics 2017;140(3)
6 études **398 patients**
Récidive : 3 = 0,8% (0,2-2,2)
DTaP ou DTwP = 0,3% (0-1,8)

Recurrence risk of a hypotonic hyporesponsive episode in two Australian specialist immunisation clinics

Nigel W. Crawford [a,b,c,*], Alissa McMinn [a], Jenny Royle [d], Teresa Lazzaro [b], Margie Danchin [b,c], Kirsten P. Perrett [b,c,e], Jim Buttery [a,f,g], Sonja Elia [b], Karen Orr [h,i], Nicholas Wood [h,i]

235 cas HHE (BC level1)
récidive : 7/ 235 cas : 3% (1-6)

Vaccine 2018