Caroline Charlier

2024

- To go or not to go? Contra-indications
- Malaria
- Vaccinations
- Hygiene
- Other prescriptions

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Maternal contra-indications

- Cardiac disease, hypertension,
- History of thromboembolism,
- Hemoglobinopathies, anemia,
- Chronic respiratory insufficiency, severe asthma,
- Chronic kidney disease
- Severe immunosuppression

Maternal contra-indications

- Obstetrical contra-indications
 - Risk of preterm birth:

multiple pregnancies, cervical incompetence

Severe obstetrical conditions:
 diabetes, toxemia, bleeding, Intrauterine

Third trimester

growth restriction, PP

Maternal contra-indications

Obstetrical contra-indications

Legal contra-indications

Maternal contra-indications

Legal contra-indications

Obstetrical contra-indications

Geographical contra-indications

Malaria

Zika

Other severe fetal/maternal infection

Country requiring a live vaccine

Low level of medical and obstetric care

Example: Dengue is more severe in pregnancy

Brazilian prospective study: 99 pregnant women vs. 447 women of reproductive age with Dengue

No increased incidence during pregnancy

Increased severity+++

- •Haemorragic dengue reported in 45 /99 (47%) versus 18% X3
- Hospitalization reported in 61 (62%) versus 26%
- •Death reported in 3/99 (3%) versus 5/447 (1%) X3

In multivariate analysis pregnancy and 3rd trimester significantly associated with DHF/ DSS (OR 3.4 and 3.8)

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Malaria

- Avoid travel in endemic areas
- Insect repellents: as non pregnant population
- Use insecticide-treated bed nets, long clothing to prevent mosquito bites
- Chemoprophylaxis

Atovaquone-Proguanil: Malarone®

Mefloquine: Lariam®

Chloroquine: Savarine®, Nivaquine®

Doxycycline: Approved during T1, contraindicated during T2 and T3

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Life-attenuated vaccines

BCG

Varicella

Yellow fever

MMR

- No teratogenic effect
- No pregnancy test before administration
- Contra indicated during pregnancy EXCEPT yellow fever
- Reassuring in case of vaccination during early pregnancy
- Vaccination of next-of-kin OK during pregnancy
- Breastfeeding OK EXCEPT yellow fever <M6

Life-attenuated vaccines

BCG

Varicella

Yellow fever

MMR

- Breastfeeding OK EXCEPT yellow fever <M6
- 2 fatal encephalitis in newborn whose mother vaccinated < M1
- With the vaccinal life attenuated strain
- > Vaccinate at M6, or stop breastfeed for 2 weeks

Other vaccines

dTPC

Influenza

COVID

Hepatitis B

Hepatitis A

(typhoid fever)

Rabies

N. meningitidis

Japanese encephalitis?

Tick born encephalitis?

dTPC recommended in France 20-36 WG every pregnancy More efficient than the cocooning strategy

Influenza and COVID recommended on every pregnancy

- Reduction of maternal severity
- > Reduction of neonatal documented influenza infection 50%

No contra-indication for post exposure rabies

Bivalent RSV vaccine Pfizer already in the US

HAS 2022 Haberg NEJM 2013

RSV?

Japanese encephalitis

Arbovirus

Flavivirus

South Asia / south east Asia

Monsoon ++

Not more frequent / not severe for pregnant mothers

Fetal losses

4/4 fetal losses during T1/T2

5/5 fetal survival during T3

Mathur Indian J Med Res 1985 cited in Ornoy Reprod toxicol 2006

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Orofecal risks

Traveller's diarrhea

Salmonellosis /Typhoid fever

Amoebiasis

Hepatitis A

Hepatitis E

Parasitic infections (taeniasis, fascioliasis, anisakiasis, trichinellosis, etc.)

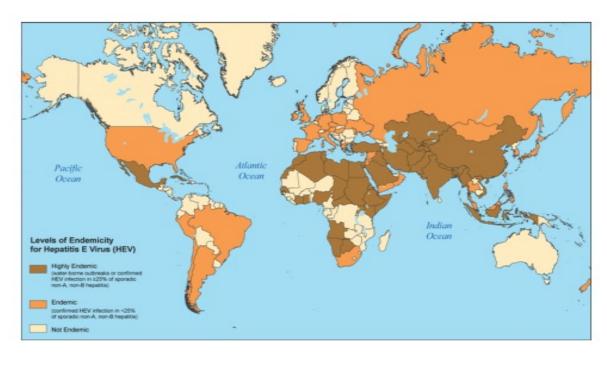
Hepatitis E

Single stranded RNA virus

4 genotypes

Oral transmission

Genotype 3	Europe	Sporadic Human and animal reservoir	Raw liver (Figatelli in Corsica)
Genotype 1	Asia, Africa	Epidemic Human reservoir Fatal hepatitis pregnancy (T3)	Contaminated waters
Genotype 2	Mexico Africa		
Genotype 4	Asia		



Hepatitis E

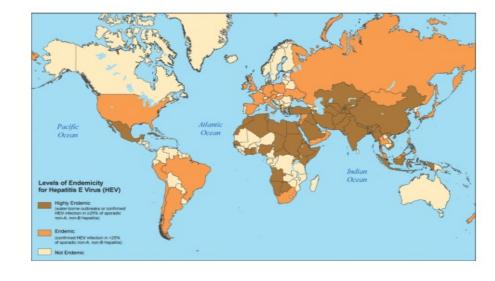
Single stranded RNA virus

4 genotypes

Oral transmission

Tropical genotypes associated

- > with fulminant hepatitis in T3 pregnant mothers
- with obstetrical complications : fetal loss, premature delivery
- 30.000 atrtibuted fetal losse / year worldwide



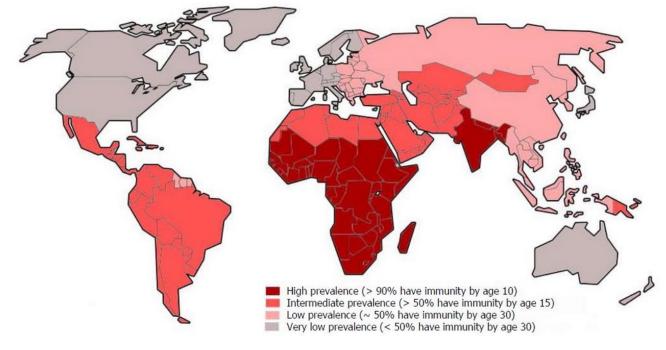
Desramé J 2005, Begum Inr J Gynecol Obstet , Rein Hepatology 2011

Hepatitis A

RNA virus

Very resistant

Oral transmission



No increased risk during pregnancy

No severe hepatitis in the child if maternal-fetal transmission occurs

Breastfeeding is possible for women affected by the condition

Vaccination is possible

Orofecal risks

- > "cook it peel it or forget it"
- > boil water 5 min / encapsulated water
- > Filter (no lode)
- > OK Chlorine tablets
- > wash hands ++++

Plane travel

- > Compression stockings
- > Drink regularly
- > Walk every 30 minutes
- > Use a low-positioned seatbelt

Other advices

- > Sun (Chloasma)
- > Freshwater baths (shistosomiasis/ leptospirosis)
- > Animal (rabies)
- > Barefeet : ancylostomiasis (hookworm)
- > Diving < 10m
- > Mountains < 2500m



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How about Zika?

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Medical kit

- Racecadotril or loperamide for diarrhea.
- Avoid empirical antibiotic therapy.
- Paracetamol (not NSAIDs) for pain.
- Phloroglucinol for spasms.
- Metoclopramide for nausea/vomiting.
- Antihistamines for itching.
- Corticosteroids for allergies.
- Miconazole for vaginal yeast infections
- and fosfomycin for cystitis

Copy of medical records.

Insurance documentation.