

ER-Infection combine meeting

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Discussion

Discussion

- Febrile traveler
- Hepatitis markers
- Hepatitis E virus

Febrile traveler

- 50% systemic illness
 - 22% dengue fever
 - 6% malaria
 - Mononucleosis (EBV, CMV)
 - Rickettsial infection
 - Typhoid or paratyphoid fever
- 15% febrile diarrhea
- 14% respiratory infection
- 22% unspecified illness

GeoSentinal data

	Systemic	Respiratory	Diarrhea	Non specified
Sub-Saharan Africa	49% 42% malaria	10%	10%	19%
Southeast Asia	34% 18% dengue 7% malaria	17%	17%	22%
Caribbean and Central and South America	25% 9% dengue 8% malaria	13%	15%	26%

History

- Common infectious disease
- Time of onset and sequences of symptoms and signs
- Geographic region of travel and types of accommodations, date and duration of stay.
- Activities and exposures during the visit.
- The type of transportation, layovers.
- Host predispositions to infection.
- Sexual contact.
- Vaccination and chemoprophylaxis

- Time of presentation:
 - Dengue: 1-2 weeks after return
 - Falciparum malaria: 2 weeks after return
 - Vivax malaria: 6 weeks after return
 - Jaundice, hepatitis: 6 weeks after return

Physical examination

- Skin lesions
- Lymphadenopathy
- Retinal or conjunctival changes
- Enlargement of liver or spleen
- Genital lesions
- Neurologic findings

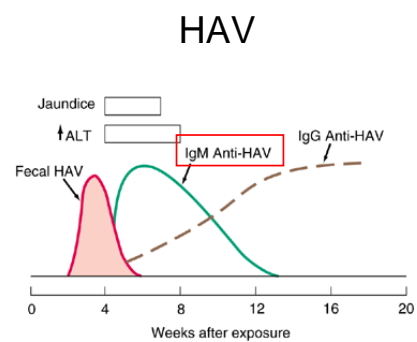
Initial workup

- Complete blood count (CBC) and differential
- Liver enzymes
- Blood cultures
- Blood smears for malaria
- Chest radiograph

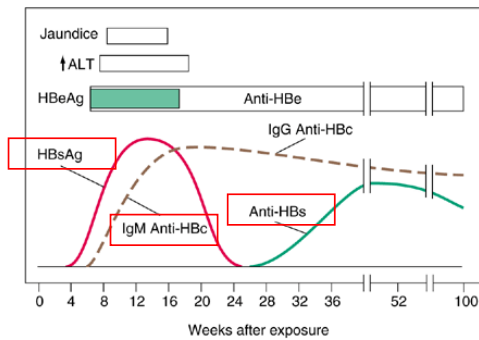
Warning signs

- Hemorrhagic manifestations
- Respiratory distress
- Hypotension or hemodynamic instability
- Confusion, lethargy, stiff neck, or focal neurologic findings.

Hepatitis markers



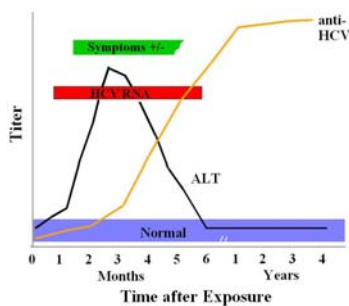
HBV



HBV

	HBsAg	Anti-HBs Ab	Anti-HBc Ab	HBeAg	Anti-HBe Ab
Vaccination	-	+	-	-	-
HBV recovery	-	+	IgG	-	+
Acute HBV	+	-	IgM	+	-
Chronic HBV > 6 months	+	-	IgG	+/-	-
Carrier	+	-	IgG	-	+

HCV



Hepatitis E virus

Hepatitis E virus

- Single strand RNA virus
- Fecal-oral transmission, blood transfusion, zoonosis
- Incubation period: 4-5 weeks

Hepatitis E virus

- Endemic area: 印度、緬甸、尼泊爾、巴基斯坦、蘇聯、阿爾及利亞、利比亞、索馬利亞、墨西哥及中國大陸
- Hepatitis E in Taiwan: sporadic cases,
 - 70-90/year reported, 10-20/year confirmed
 - Male predominant (80.3%)

Clinical manifestation of HEV

- Usually self-limited.
- Seldom progressed to chronic hepatitis
- Malaise, anorexia, nausea, vomiting, abdominal pain, fever, hepatomegaly, jaundice.
- Diarrhea, arthralgia, pruritus, and urticarial rash is less common.
- Recovered 1-6 weeks after onset

Fulminant hepatitis

- Mortality: 0.5-3%
- Risk factor for fulminant hepatitis
 - Immunosuppression
 - Pregnancy, esp third trimester
 - Pre-existed liver disease
 - Malnourished
 - Solid organ transplantation

Diagnosis

- Serum or blood HEV PCR
 - Stool: one week before onset and persisted for 2 week
 - Blood: may persist four months
- Anti-HEV IgM
 - Persisted for 4-5 months

Treatment

- Mainly supportive
- No vaccine
- Prevent by 飲食習慣

Take home message

- Complete history and physical examination.
 - Find skin lesions
- Don't forget dengue fever, malaria
- Warning signs: hemorrhage, respiratory or circulatory unstable, confusion

Thank you very much