

# CASE 4

## CASE STEM:

7yo M presents with high fever and a rash to his legs and arms. He also complains of headache, nausea and vomiting and abdominal pain. There has been no diarrhea. He recently returned from visiting his relatives in Tennessee. Please manage the patient.

## HISTORY:

PMHx: tonsillectomy, no admissions, immunizations UTD.

Meds: None

Allergies: Amoxicillin (rash)

SHx: lives with parents, one brother.

**HPI:** Has had a fever for the last 5d, typically over 39C. Has been complaining of headache, nausea, vomiting and belly pain for the same period. Hasn't been improving and yesterday Mom noticed a rash on both his wrists and ankles and it seems to be spreading. His mother says he has started coughing as well and seems "lethargic" and "irritable". No one else who went on the trip is sick. He has been taking in oral fluids but his appetite is much reduced. No diarrhea. Remainder of ROS unremarkable.

**Travel history:** Returned 10d ago from Tennessee. Spent a week there, mostly in the city but towards the end of the trip they were out in the woods hunting with their cousins. Did not eat any undercooked food or wild game. No known bites, no swimming in lakes/streams.

**Pre-travel:** no visits to a travel specialist.

## PHYSICAL EXAM:

HR: 140, BP 110/60, RR 30, Temp 39.5, SpO2 93% RA

General Appearance: patient appears unwell, squinting against the light, slightly pale

CNS: PERL, no focal deficits, oriented x3

HEENT: Normal conjunctiva, MMM, neck supple, no lymphadenopathy

CVS: Normal HS

RESP: GAEB crackles to both bases, no wheeze. Moderately increased work of breathing

GI: Generalized tenderness, no focal, no rebound/guarding, no hepatosplenomegally

GU: nil

MSK: maculopapular rash to arms and legs, starting to spread onto trunk

## QUESTIONS:

1) What is your differential diagnosis for this patient?

2) What is your initial management?

3) What investigations would you order?

## **INVESTIGATIONS:**

CBC: Hb 140, Plts 70, WBC 18.2

Lytes: Na 128, K 4.5, Cl 110

LFTs: ALT 120, AST 89, ALP normal, bili normal

INR: 1.1 PTT 30

CXR: bilateral pulmonary edema

## **PROGRESSION:**

The RN pulls you over the show that the blood pressure cuff has left petechiae on the boys arm.

## **Questions:**

1) **What is your differential diagnosis for a petechial rash?**

2) **What is the management of Rocky Mountain Spotted fever (RMSF)? What about for children and pregnant women?**

3) **How can you confirm the diagnosis?**

**Please come up with 3-4 key points you learned about the diagnosis and management of RMSF to share with the group.**

## **Learning Objectives:**

1) Approach to febrile traveller

2) DDX for petechial rash

3) Diagnosis of RMSF

4) Treatment of RMSF