**Vaccination**

Case:

AA is an 8-month male who was brought to your clinic for rashes. Five days prior to consult, the patient had fever, with a maximum temperature of 39 C, which was temporarily lysed with Paracetamol. Hours after, the patient had occasional cough. The patient continued to be active and playful. One day prior to consult, his mother noticed erythematous rashes on the face, which eventually spread on the trunk and extremities. AA still has good suck and activity.

On physical examination, his weight was 8.6 kgs, length of 68 cm. Heart rate was 130 bpm, respiratory rate was 30 breaths per minute, with temperature of 38 C. There were note of erythematous, maculopapular rashes on the truck and extremities. You noticed minimal yellowish eye discharge.

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| What else would you like to ask in the history? | Ask about other signs and symptoms (diarrhea, vomiting, respiratory distress, irritability, gum bleeding, epistaxis, melena or hematochezia all were not present)  Past Medical History: No history of allergy to food, medications or vaccines  Family Medical History: No history of allergy  Personal/Social: No similar illness in household or community, but cousin had rashes and fever last week  Immunization |
| What else would you look for in the Physical Examination? | Koplik’s spots  Chest findings (No retractions, chest lag, breath sounds) |
| What are your differential diagnosis and basis for each? | Measles: fever, rashes, Koplik’s spots, cough, eye discharge  Dengue Fever: fever, rashes, cough  Kawasaki syndrome: fever, rashes (ruled out because Kawasaki does not present with Koplik’s spot and prodromal cough, while measles does not present with thrombocytosis |
| What tests will you ask for and why? What do you expect to find? | CBC: to look for infection and level of platelet count – decreased white blood cell count (with lymphocytes decreased more than the neutrophils)  Chest x-ray: to look for infiltrates or signs of effusion – no significant chest findings  Measles IgG/IgM: to identify Measles infection – positive for IgM and IgG (take note that if the specimen is collected <72 hours after the onset of rash, a second specimen should be obtained because IgM antibodies appears 1-2days after the onset of rash and remains detectable for about 1 month.)  Dengue NS1, Dengue IgG/IgM: to identify Dengue infection – negative Dengue NS1, IgG and IgM |
| What is your primary working impression? | Measles (ICD Code: B05.9 measles without complications) |
| What will be your management? | Supportive  - hydration per orem (if able to feed)  - continue breastfeeding and complementary feeding  - fever control (antipyretics)  Vitamin A therapy (100,000 IU once a day for 2 days: for patients 6mo – 11mo old)  200,000 IU for 12mo and older  50,000IU for <6mo |
| How will you advise the parents or primary caregivers? What anticipatory guidance will you give? | Signs and symptoms to watch out for  Possible complications of measles (diarrhea, middle ear infection, bronchopneumonia, encephalitis)  Transmission (airborne or large respiratory droplets, isolate patient to others)  Immunization  Nutrition  Development (screen time, ROR)  Safety at home |
| How will you give measles vaccine? What are its adverse events? | Measles vaccine given subcutaneously at a minimum age of 9 months, but may be given as early as 6months of age in cases of outbreaks. If monovalent measles vaccine not available, MMR may be given.  Some of the adverse events are fever and rash. For MMR, fever, rash, and seizures are the adverse events. |