

### SESSION 2 – A CHILD WITH A RASH – STUDENT HANDOUT

#### Aims of session

1. Be able to recognise key points in the clinical history that could help to distinguish between the different causes of a rash.
2. Be able to describe the typical appearance of various rashes and identify the cause of the rash.
3. When to be worried about a child with a rash.
4. Know the basic investigations and management of a child with a rash.
5. Be more familiar with the public health considerations when managing a child with a rash.

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PLEASE COMPLETE THE APPROPRIATE FEEDBACK FORM BEFORE THE TEACHING SESSION!



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### Case 1

#### Case study

Chinar is a 5-year-old girl who presents to CAU with her mother. Her mother states that 2 days ago Rosie came home from school complaining of a sore throat and a runny nose. The next day she developed a cough and has felt generally under the weather since then and her mother has been looking after her at home. She thought Chinar had just picked up a cold from school as there's 'something going around at the moment', but when she was getting her dressed this morning, she noticed a blotchy rash had developed on her abdomen. As she remembered something about rashes potentially being serious, she thought she would bring Chinar to hospital to be checked out. Chinar is eating slightly less than normal but is drinking well and passing urine as normal. She has been sleeping more during the day.

Chinar was born by cesarean section at 38+1 gestation due to failure to progress during labour. She required some initial stimulation and breathing support but did not need to be admitted to NICU and was

allowed to leave hospital with her mother 2 days later. Since then she has been hitting her developmental milestones and apart from the odd cough and cold she has no medical conditions. She is up to date with her vaccinations.

Examination of the cardiovascular and neurological systems is unremarkable. When listening to her chest you hear transmitted upper airway sounds but the lungs are clear with equal air entry on both sides. She is obviously coryzal and her pharynx is inflamed. Examination of the abdomen is overall unremarkable, however you do notice a pink, macular rash in patches across the abdomen. When her mother sees it, she comments that it appears to be in a different place to before, and the areas she previously noticed have cleared.

The nurse provides you with the following observations:

Temp = 37.7°C

RR = 26 breaths per minute

O2 sats = 97% on air

HR = 100bpm



*Source: Don't Forget the Bubbles*

### Discussion

How would you describe the rash? What are the top 3 differentials and what is the most likely diagnosis in this case? What key points in the history/examination points towards this diagnosis? How would you investigate and manage this child? What are the important public health considerations in this case?

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### Case 2

#### Case study

Edgar is a 4-year-old boy brought to CAU by his grandmother with a new-onset rash. He was staying with her over half term and had been unwell for 4 days previously with general malaise, fever and mild coryzal symptoms. Yesterday he began complaining that his skin felt uncomfortable and this morning his grandmother noticed a flat rash on his abdomen that he has since started itching and raising into bumps. As his parents are out of the country on holiday, she wanted to bring him to hospital to make sure it wasn't anything serious – she hasn't had young children for many years and has forgotten about 'all these illnesses they get'.

Edgar was born at 40w gestation by vaginal delivery. He is growing and developing well and is up to date with his immunisations. He attends nursery 5 days a week whilst his parents are at work.

On examination Edgar's cardiovascular, respiratory, neurological and ENT examinations are unremarkable. When looking at his abdomen you notice crops of a predominantly papular rash with some vesicles interspersed within that he is trying to itch. You also see that more papules have appeared on his face and he has a couple of spots on his arms also.

The nurse provides you with the following observations:

Temp = 37.5°C

RR = 29 breaths per minute

O2 sat = 98% on air

HR = 115bpm



Source: GPonline

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### Discussion

How would you describe the rash? What are the top 3 differentials and what is the most likely diagnosis in this case? What key points in the history/examination points towards this diagnosis? How would you investigate and manage this child? When can Edgar spend time with other children and go back to school?

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## Case 3

### Case study

Jack is an 18-month-old boy who presented with a rash. This started behind the ears and spread to the rest of the trunk and limbs over the past few days. The spots of rash have also “started joining together”. His mum also noticed that he has been generally feeling unwell over the past several days with a cough, runny nose and itchy eyes, but thought it was just a simple cold so she did not bring him to see the doctor earlier. He was also running a temperature, but she has controlled this with calpol.

He was born at 40 weeks gestation and had no complications during pregnancy or birth. He was otherwise fit and well. However, he was not up to date with his immunisations as his mother did not see the need for them.

On examination, you notice a widespread maculopapular rash over his trunk and limbs, with some confluence. He was also coughing but it was non-productive. ENT examination shows white spots on an erythematous buccal mucosa.

The nurse provides you with the following observations:

Temp = 38.4°C

RR = 40 breaths per minute

O2 sats = 98% on air



Source: Centers for Disease Control and Prevention

### Discussion

How would you describe the rash? What are the top 3 differentials and what is the most likely diagnosis in this case? What key points in the history/examination points towards this diagnosis? How would you investigate and manage this child? What are the important public health considerations in this case?

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## Case 4 (bonus) – Kawasaki Disease

*\*To be discussed only if time permits\**

### Case study

Douglas is a 4-year-old boy who was taken to ED by his mum after developing a rash on the palms and soles of his feet on the background of a persistent fever which wasn't resolving with calpol. His mum said this was his 5<sup>th</sup> day of fever which was 38.4°C when she took his temperature this morning and he had also been complaining of a sore throat and looking "generally unwell".

He was born post-term at 42 weeks by c-section with no complications in pregnancy or delivery. He is one of 4 children and lives with his siblings and mum and dad, all of whom are symptom free. He hasn't been to school for the last month as it is the summer holidays and he has been spending time with his family at home. There are no unwell contacts and he hasn't travelled abroad.

On examination you can tell Douglas feels unwell. He looks flushed and is sitting quietly on his mum's lap. He has bilateral conjunctival irritation and his cervical lymph nodes are significantly swollen. On exposure

you can see he has a rash over his torso and on his hands and feet which is peeling in places. His lips are also cracked with spots on his tongue.

The nurse provides you with the following observations:

Temp = 38.7°C

RR = 35 breaths per minute

O2 sats = 97% on air

HR = 145bpm



Source: Primary Care Dermatology Society

### Discussion

How would you describe the rash? What are the top 3 differentials and what is the most likely diagnosis in this case? What key points in the history/examination points towards this diagnosis? How would you investigate and manage this child?

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### Normal ranges for vitals

Age	HR	RR	SBP
0-1 month	110-180	30-50	65-100

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# PaedsPALS

## PaedsPALS Case Based Teaching – Session 2

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1-12 months	110-160	30-40	70-105
1-2 years	100-150	25-35	75-105
2-5 years	80-140	25-30	80-110
5-12 years	70-120	20-25	80-120
>12 years	60-100	15-20	90-130