

'Measles and other old-fashioned rashes'

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NEGS 2010

Exanthems

- medical name given to a widespread rash that is usually accompanied by systemic symptoms such as
 - fever,
 - malaise and
 - headache

Exanthems 2



Exanthems 3

- Exanthems during childhood are very common and are usually associated with the following viral skin infections:
 - Common winter and summer viruses including respiratory and enteroviruses
 - Chickenpox (varicella)
 - Measles
 - German measles (rubella)
 - Rosella
 - Fifth disease (erythema infectiosum)
 - Later thoracic exanthema
- Exanthems may also be caused by other bacterial or viral infectious conditions including:
 - Kawasaki's disease
 - Rickettsial diseases
 - Smallpox (deadly disease hopefully now eradicated by widespread vaccination)
 - Infectious mononucleosis (usually presents as Ginette Crosti syndrome)
 - Viral hepatitis
 - Scarlet fever
 - Meningococcal disease
 - Staphylococcal toxin infections
 - Toxic shock syndrome (TSS)
 - Staphylococcal scalded skin syndrome (SSSS)
 - Streptococcal toxic shock-like syndrome (STSS)



The Irish Times - Monday, June 7, 2010

Measles rate in Ireland is second highest in Europe

EITHNE DONNELLAN Health Correspondent

IRELAND HAD the second-highest incidence rate of measles in Europe in the first quarter of this year, according to new figures published by the European Centre for Disease Control.

The highest incidence was in Bulgaria, where 11 children died from measles in the first three months of 2010.

Some 280 cases of measles were reported in Ireland during the same period and almost one-third of these had to be hospitalised. No deaths were reported here.

The number of cases of measles in Ireland continued to rise during April and May. At the end of last month, some 355 cases of measles had been reported so far this year, some 15 times more than over the same period last year.

Dr Suzanne Cotter, public health specialist with the Health Protection Surveillance Centre, said the high figure for Ireland in the first part of this year was accounted for by an outbreak of measles that had been ongoing since about August last year.

"The outbreak has caused an enormous amount of disease in the community relative to our population size."

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Measles (Presentation)

- fever,
- malaise,
- coryza,
- conjunctivitis and cough



- rash is
 - erythematous and maculopapular,
- starting at the head and spreading to the trunk and limbs over three to four days





- Koplik spots
 - small red spots with blueish-white centres) may appear on the mucous membranes of the mouth
 - 2 days before generalised rash

Measles 2

(Diagnostic Criteria)

- If a child has the following features then these are strongly suggestive of measles:
 - rash for at least three days,
 - fever for at least one day,
 - At least one of the following
 - Cough
 - Coryza
 - Conjunctivitis
 - Koplik Spots

Take Home (Measles)

Cause	Paramyxovirus
Special feature(s)	Conjunctivitis Koplik spots
Treatment	supportive
Special Precautions	Non immunised children over 13 months
Exclusion advice	5 days after rash onset

Rubella



Rubella 2

- 25-50% of rubella cases the disease is usually so mild there may be few or no signs or symptoms
- Rash begins on the face that spreads to the neck, trunk and extremities.
 - Appear as pink or light red spots about 2-3mm in size.
- Lasts up to 5 days (average is 3 days).
- May or may not be itchy.
- As rash passes, affected skin may shed in flakes.
- Usually not as widespread as in measles

Measles Vs Rubella

Symptom	Rubella	Measles
Incubation	14 -21	9-11
Temp	Mild to mod	High
Rash	light	Dark papular
Conjunctivitis	uncommon	Common
Lymph Nodes	common	uncommon
Arthralgia	common	myalgia
Duration of Rash	3-4	3-7
Buccal mucosa changes	none	Koplik spots

Take Home (Rubella)

Cause	Rubivirus
Special feature(s)	swollen lymph nodes in the neck, especially behind the ears
Treatment	Supportive
Special Precautions	Non immune pregnant women
Exclusion advice	5 days after rash onset



Photo Courtesy of CDC - Dr. Heinz F. Eichenwald



Photo Courtesy of CDC

Chicken Pox

- Usually begins as an itchy rash of red papules
- progressing to vesicles
- Stomach, back and face, and then spreading to other parts of the body



Chicken Pox 2



- A clue to the diagnosis
 - exposure to an infected contact within the 10-21 day incubation period.
- Avoid aspirin (Reye syndrome)

Take Home (chicken pox)

Cause	varicella-zoster
Special feature(s)	Papules and Vesicles
Treatment	Supportive
Special Precautions	Immunocompromised Pregnant women (No PH)
Exclusion advice	5 days after rash



- High fever (often up to 40 degC) for 3-5 days
- Upper respiratory symptoms such as sore throat, cough, runny nose or congestion
- Irritability and tiredness

Roseola infantum

- Rash appears around days 3 to 5 as fever subsides
 - Typically small pink or red raised spots that blanch when touched
 - Lighter halo of pale skin
 - Starts on trunk and may spread to involve the neck, face, arms and legs
 - Non-itchy, painless and does not blister



Take Home (Roseola)

Cause	herpes virus 6
Special feature(s)	High temperatures followed by rash (2-5) days
Treatment	Supportive
Special Precautions	None
Exclusion advice	None



Scarlet Fever

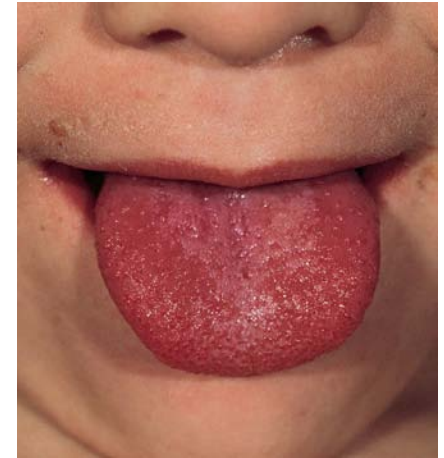
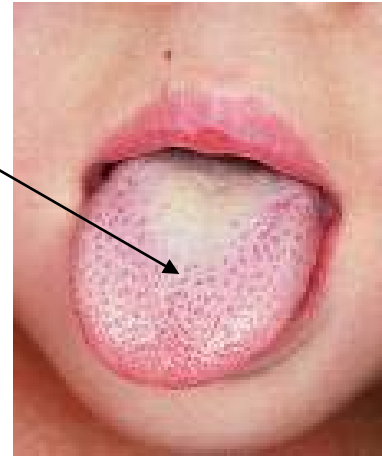
- Scarlet fever is a bacterial illness
- Group A streptococcal infections that cause scarlet fever are contagious
- 1- to 4-day incubation period
- sudden fever associated with
 - sore throat,
 - swollen neck glands,
 - headache, nausea, vomiting, loss of appetite,

SF 2 : the rash

- Appears 12-48 hours after.
- starts below the ears, neck, chest, armpits and groin before spreading to the rest of the body over 24 hours.
- 'boiled lobster' appearance.
- Look like sunburn with goose pimples. The skin may have a rough sandpaper-like feel.

Scarlet fever 3

- swollen and red strawberry tongue



Pastia lines



Scarlet fever rash

Pastia's lines

For reproduction of slides, acknowledgement of the editors and their clinical departments is appreciated.

Take Home

Cause	group A streptococcus pyogenes
Special feature(s)	Rash: Sandpaper roughness
Treatment	Penicillin / erythromycin (5 days)
Special Precautions	New murmurs
Exclusion advice	24 hrs after fever subsides



Fifth disease (Slapped Cheek)

- Infectious mono nucleosis
- caused by *Parvovirus B19*
- 30 % symptom free
- first sign of fifth disease is firm red cheeks
- A rash follows 1 to 4 days later with a lace or network pattern on the limbs and then the trunk.

Take Home (Slapped Cheek)

Cause	parvovirus B19
Special feature(s)	'bright red cheeks'
Treatment	Supportive
Special Precautions	Immunocompromised Sickle cell
Exclusion advice	Safe once rash appears



Kawasaki disease

- Fever persisting at least 5 days
- Generally high and spiking up to 40degC or higher
- No response to antibiotics
- Fever persists for 1 to 2 weeks or longer

Diagnostic criteria

- Fever for five days straight
- Redness of the eyes
- Swollen lymph nodes in the neck
- Red throat, tongue, or lips
- Redness or swelling of the fingers and toes
- Rash with flat red lesions, raised red lesions, blisters, or any combination of these



Take Home

Cause	unknown cause (bacteria or virus)
Special feature(s)	Fever plus 4 diagnostic criteria
Treatment	gamma globulin and high-dose aspirin.
Special Precautions	Coronary artery aneurysm 2% mortality
Exclusion advice	Admit to hospital



Hand Foot and Mouth Disease

- Coxsackie virus A16 or Enterovirus 71
- very infectious
- incubation period of 3 to 5 days
- most often affecting young children during the summer months
- Specific treatment is not necessary

Take Home

Cause	coxsackieviruses
Special feature(s)	Tender blisters on hand foot and mouth
Treatment	Supportive
Special Precautions	Hand hygiene to prevent spread
Exclusion advice	None



Take Home

Cause	streptococcal or staphylococcal bacteria
Special feature(s)	honey-coloured crust forms over this rash
Treatment	Flucloxicillin / erythromycin (5 days) Topical fucidin
Special Precautions	Highly contagious
Exclusion advice	2-3 days after therapy started



Scabies 2

- Acquired by skin-to-skin contact with someone else with scabies
- **Itch**
The itching appears a few days after infestation.
- **Burrows**
Scabies burrows appear as tiny grey irregular tracks between the fingers wrists, armpits, buttocks, on the penis, insteps and backs of the heels.
- **Generalised rash**
Scabies rash appears as tiny red intensely itchy bumps on the limbs and trunk.
- **Nodules**
Itchy lumps or nodules in the armpits and groins or along the shaft of the penis are very suggestive of scabies.
- **Acropustulosis**
Blisters and pustules on the palms and soles are characteristic of scabies in infants.
- **Secondary infection**

Take Home (Scabies)

Cause	Sarcoptes scabie mite
Special feature(s)	Itch, Known contact 2 weeks before Burrows
Treatment	permethrin 5% dermal cream malathion 0.5% aqueous liquid.
Special Precautions	Attention to detail to eradicate
Exclusion advice	Until after treated



Take Home (Erythema toxicum)

Cause	Normal
Special feature(s)	blisters have a white or yellow material inside.
Treatment	None
Special Precautions	None
Parental advice	Will pass in 2-3 weeks



