



EXANTHEMATOUS INFECTIOUS DISEASES IN PEDIATRICS

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EXANTHEMATOUS DISEASES

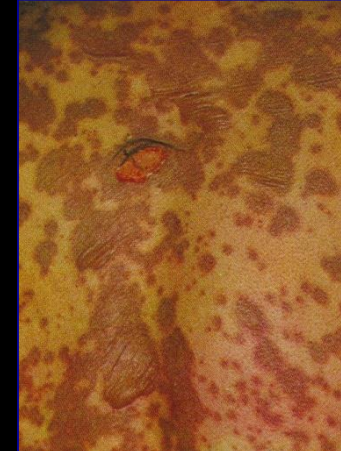
INFECTION

RASH

NON-INFECTIOUS



Measles



Drug reaction

Recognition of infectious rash is very important for the patient, those who have been in contact with the patient, and public health.

IMPORTANT ISSUES IN THE DIAGNOSIS OF INFECTION RELATED EXANTHEMATOUS DISEASES

1. **Exposure:** Have you been in contact with a patient with a rash in the last 1-2 weeks in the history?
2. **Previous rash disease:** Have you been a rash disease in the past?
3. **Vaccination history**
4. **The presence and features of the prodromal period**
5. **Characteristics of the rash:** Onset site, maculopapular or maculopapular...
6. **Presence of pathognomonic findings**
7. **Diagnostic laboratory tests:** Measles IgM and IgG

DISEASES THAT CAUSE MACULOPAPULAR RASH

Measles

Rubella

Scarlet fever

Roseola infantum

Erythema infectiosum



Staphylococcal toxic shock syndrome

Typhus

Meningococcemia

Toxoplasmosis

Cytomegalovirus infection

Infectious mononucleosis

Enteroviral infections

Toxic erythema

Drug rashes

Kawasaki disease

DISEASES THAT CAUSE PAPULOVESICULAR RASH

Chickenpox



Smallpox

Monkeypox

Eczema herpeticum

Eczema vaccinatum

Coxsackie virus infections

Rickettsial pox

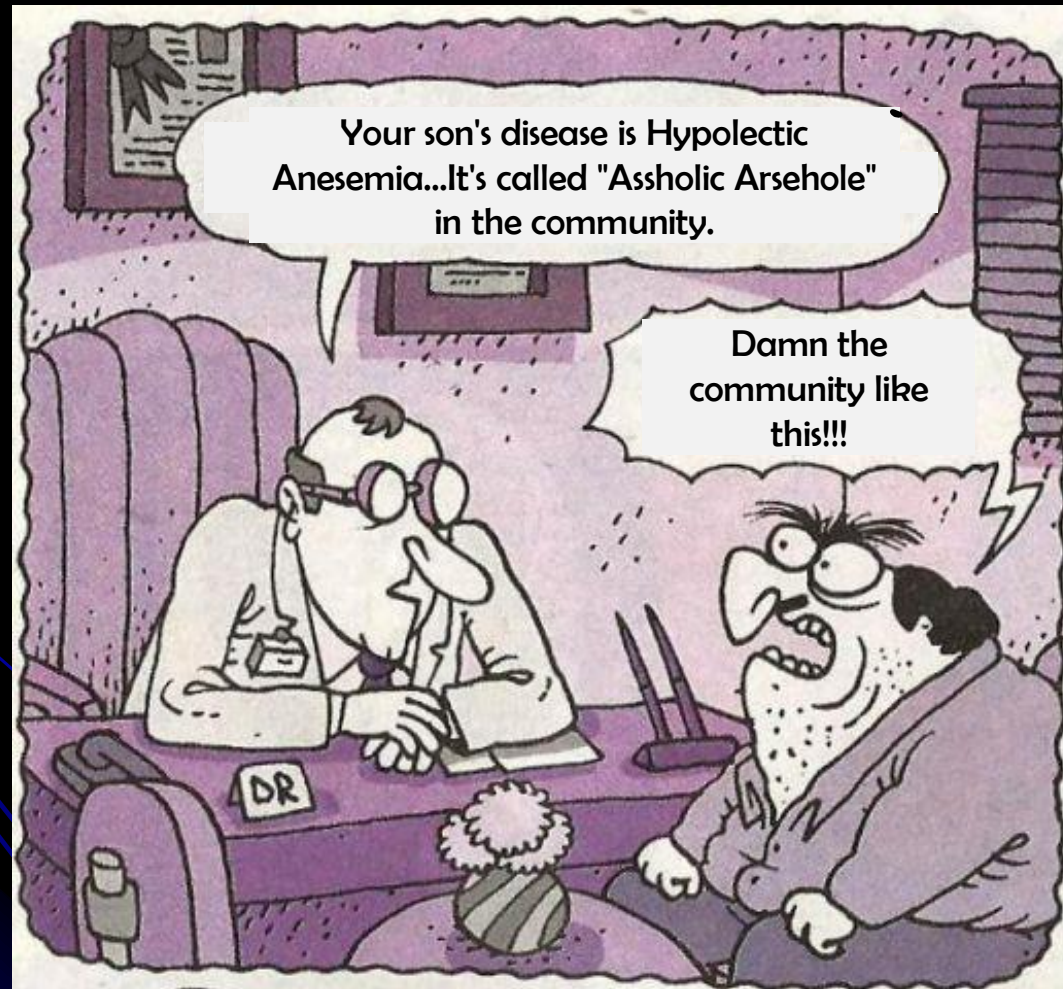
Impetigo

Insect bite

Dermatitis herpetiformis

EXANTHEMATOUS DISEASES

To be able to Tell in the Community's Language...



HISTORICAL NOMINATION OF INFECTIOUS DISEASES WITH MACULOPAPULAR RASH

- ❑ Six separate childhood exanthems were defined in the late 19th, early part of the 20th Century. These were named in the order they were discovered and are outlined.
- ❑ The term fourth disease or Filatov-Dukes disease is thought to be a variant of scarlet fever and is no longer used.

<i>Number</i>	<i>Disease</i>
<i>First</i>	Measles (Rubeola)
<i>Second</i>	Scarlet fever
<i>Third</i>	Rubella (German measles)
<i>Forth</i>	Filatov-Dukes disease
<i>Fifth</i>	Erythema infectiosum
<i>Sixth</i>	Roseola infantum, Exanthem subitum

EXANTHEMATOUS DISEASES

Causative Agent

Measles: It is an RNA virus of the Paramyxoviridea family

Scarlet Fever: Group A beta-hemolytic streptococcus (*Streptococcus pyogenes*)

Rubella: It is an RNA virus from the Togaviridae family.

Fifth Disease: Parvovirus B19 (DNA virus)

Sixth Disease: Human Herpesvirus-6 and 7 (DNA virus)

Chickenpox: Varicella-Zoster virüs (DNA virus)



Koplik's spots



Red strawberry tongue



Forchheimer's spots



Nagayama's spots



Oral chickenpox lesions

EXANTHEMATOUS DISEASES

Incubation Period

Measles: 8-12 days

Scarlet Fever: 1-7 days (average 2-4 days)

Rubella: 14-21 days.

Fifth Disease: 4-28 days (average 16-17 days)

Sixth Disease: 5-15 days (average 10 days).

Chickenpox: 10-21 days (average 14-16 days)



Koplik's spots



Red strawberry tongue



Forchheimer's spots



Nagayama's spots



Oral chickenpox lesions

EXANTHEMATOUS DISEASES

Prodrome

Measles: Fever, dry cough, rhinorrhea, conjunctivitis, photophobia, Koplik spots

Scarlet Fever: High fever, sore throat, abdominal pain, vomiting

Rubella: Mild fever, headache, malaise, mild rhinorrhea and conjunctivitis without photophobia, Lymphadenopathies may be noticed at least 24 hours before the rash
Retroauricular, suboccipital, and posterior cervical LAP, Forchheimer's spots

Fifth Disease: It is usually mild, mild fever (15-30%), headache, arthralgia, myalgia

Sixth Disease: High fever lasting 3-5 days, irritability, febrile convulsion

Chickenpox: Mild fever, malaise, loss of appetite before 24 hours from rash



Koplik's spots



Photophobia



Conjunctivitis



Forchheimer's spots



Posterior auricular
lymph nodes

EXANTHEMATOUS DISEASES

Enanthema

Scarlet Fever: White and red strawberry tongue, petechiae on the soft palate, structures such as crypt-membrane-exuda in the tonsils are seen, it is nonspecific.

Measles: Koplik's spots are seen, not seen in any other disease, it is pathognomonic.

Rubella: Forchheimer's spots are seen, petechiae and pink-colored rashes on the palate, not seen in all cases, nonspecific.

Sixth Disease: Nagayama's spots are seen, but have been described in East Asian societies, they are not common in Western societies, they are nonspecific.

Chickenpox: Papulovesicular eruptions similar to those of the skin appear and become aphthous lesions with rupture of the vesicle, nonspecific.

Kawasaki disease: Strawberry tongue, hyperemia in the oropharynx, redness, cracking and peeling of the lips are seen, it is nonspecific, only the presence of this finding cannot be diagnosed, other criteria are also required.



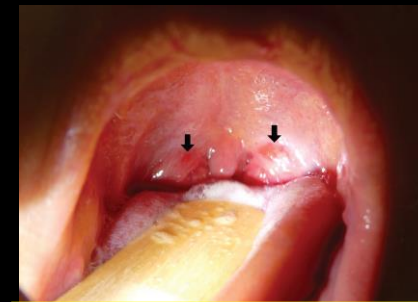
Koplik's spots



Red strawberry tongue



Forchheimer's spots



Nagayama's spots



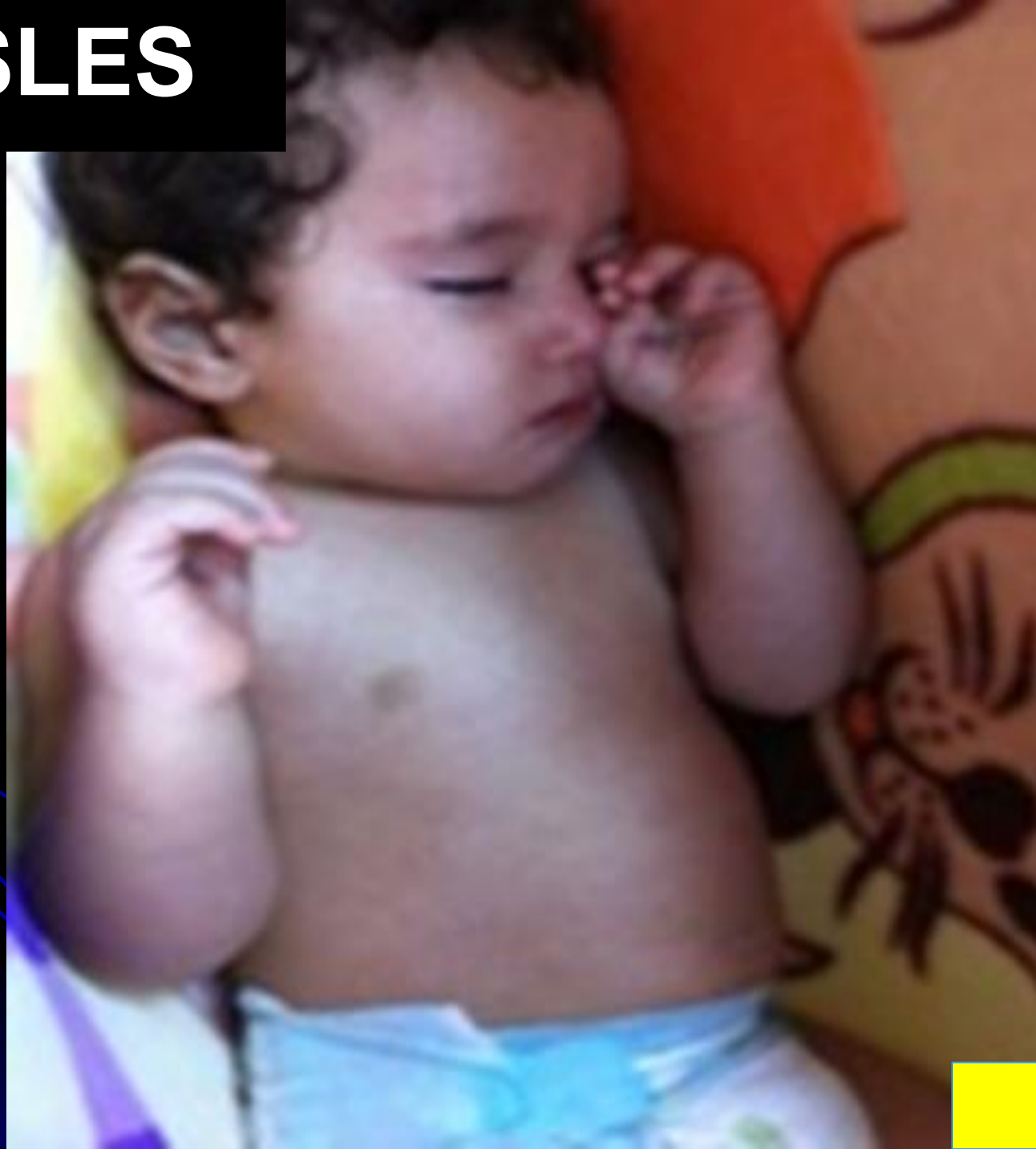
Oral chickenpox lesions

MEASLES



Conjunctivitis

MEASLES



Photophobia

MEASLES

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Koplik's spots

MEASLES

RASH

Begins on forehead, hairline, behind ears, upper neck.

Spreads to face, neck, trunk and extremities.

It has spread to the whole body on the third day.

Lesions may merge with each other, except those on the extremities.

It fades in the same order it started.

Mild desquamation is seen as it fades.

Leaves brownish pigmentation in place.

Rashes on hands and feet do not desquam.

MEASLES

FIRST DAY

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MEASLES

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SECOND DAY

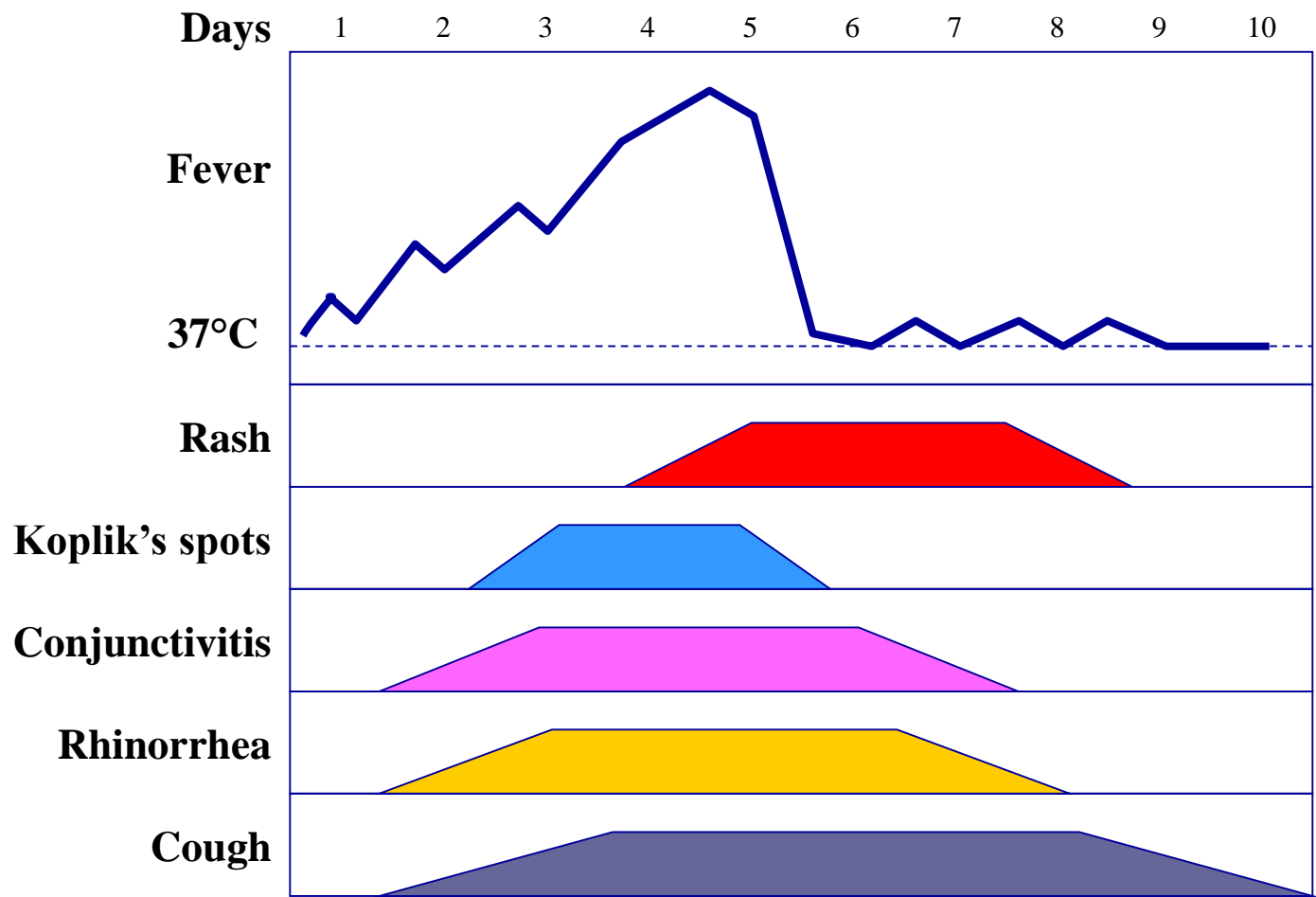


THIRD DAY

MEASLES



MEASLES



SCARLET FEVER

RASH

ENANTHEMA

Tonsils: Hyperemic, hypertrophic, exuding

Pharynx: Edema, hyperemic

Tongue: Strawberry tongue (white and red)

Soft palate: Petechiae

EXANTHEMA

Macular rash with small papules

Goose skin or Sandpaper-like appearance

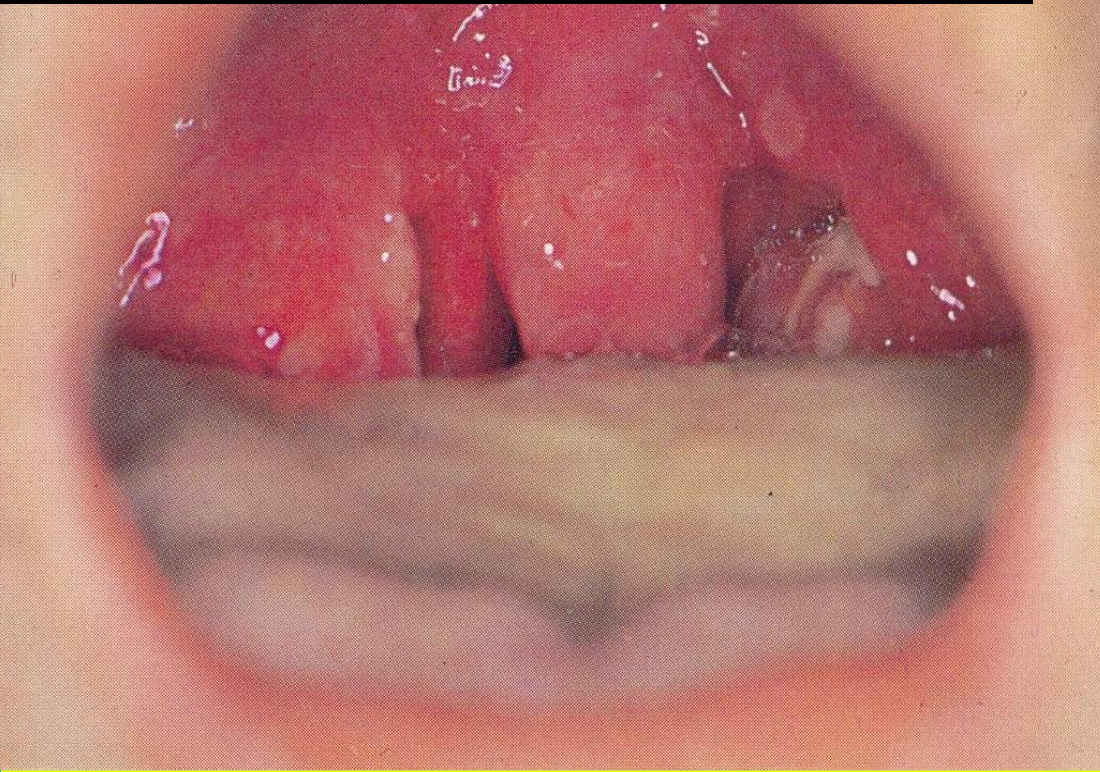
Peroral pallor

Pastia lines

Healing with desquamation

SCARLET FEVER

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Pharyngitis, exudative tonsillitis

Pharyngitis, palatal petechiae



SCARLET FEVER



White strawberry tongue

Red strawberry tongue



SCARLET FEVER

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Circumoral pallor

SCARLET FEVER

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Goose skin or Sandpaper-like rash

SCARLET FEVER

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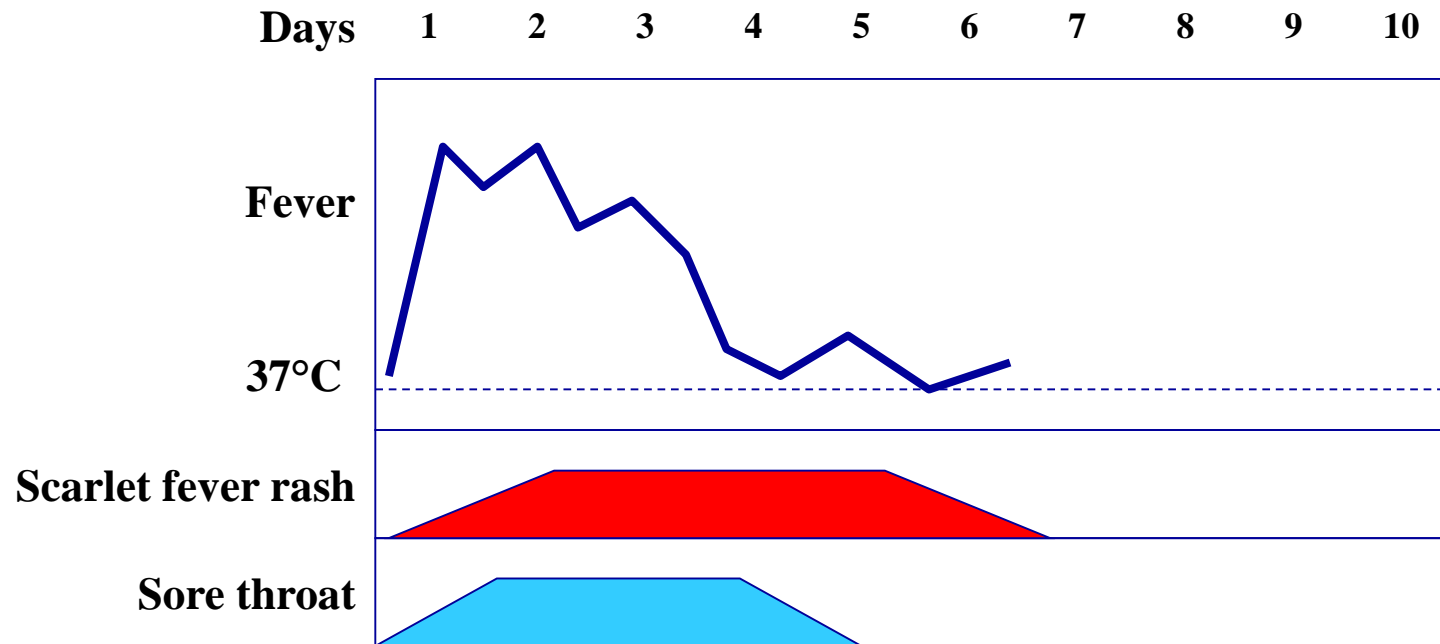


Pastia's lines



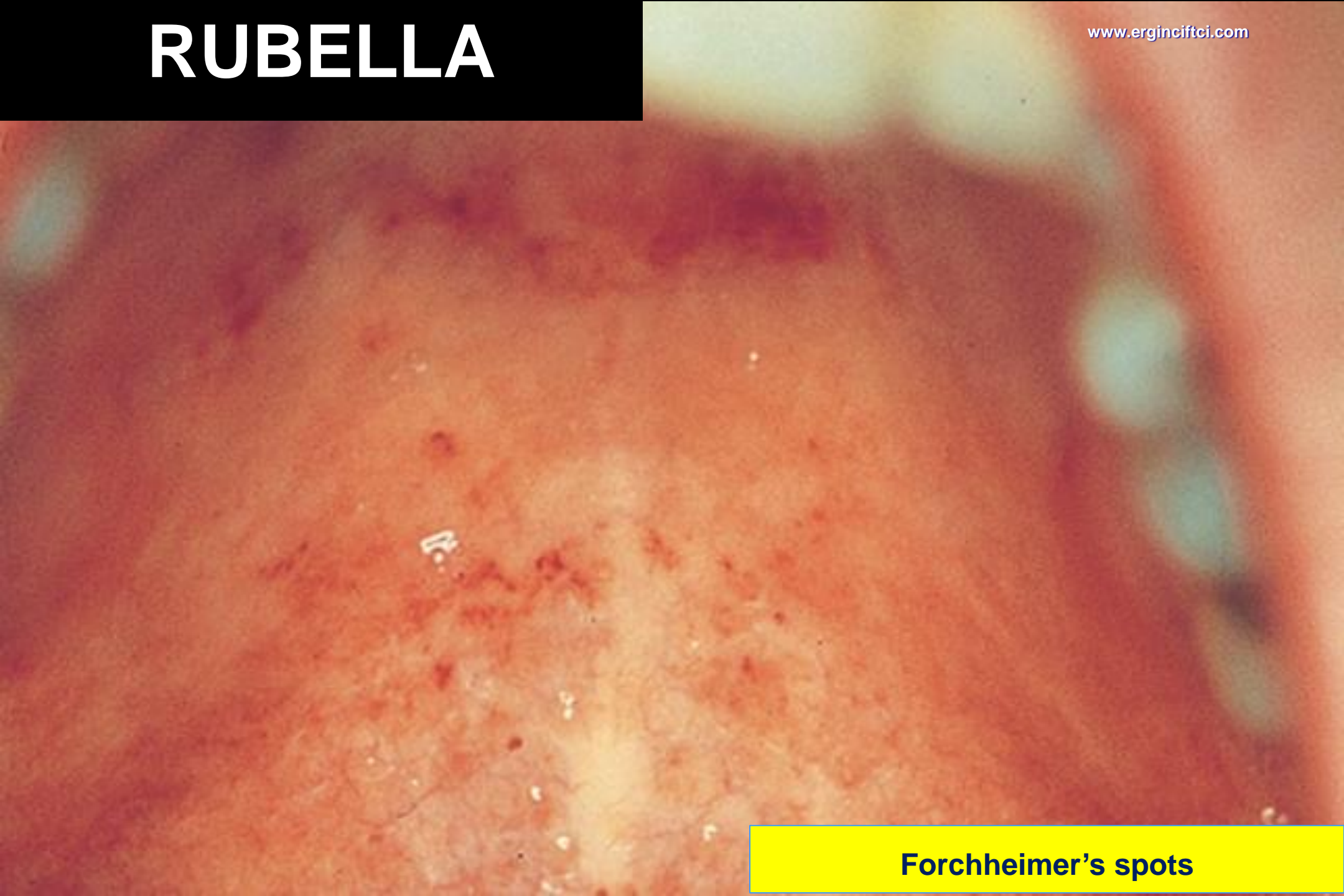
Desquamation

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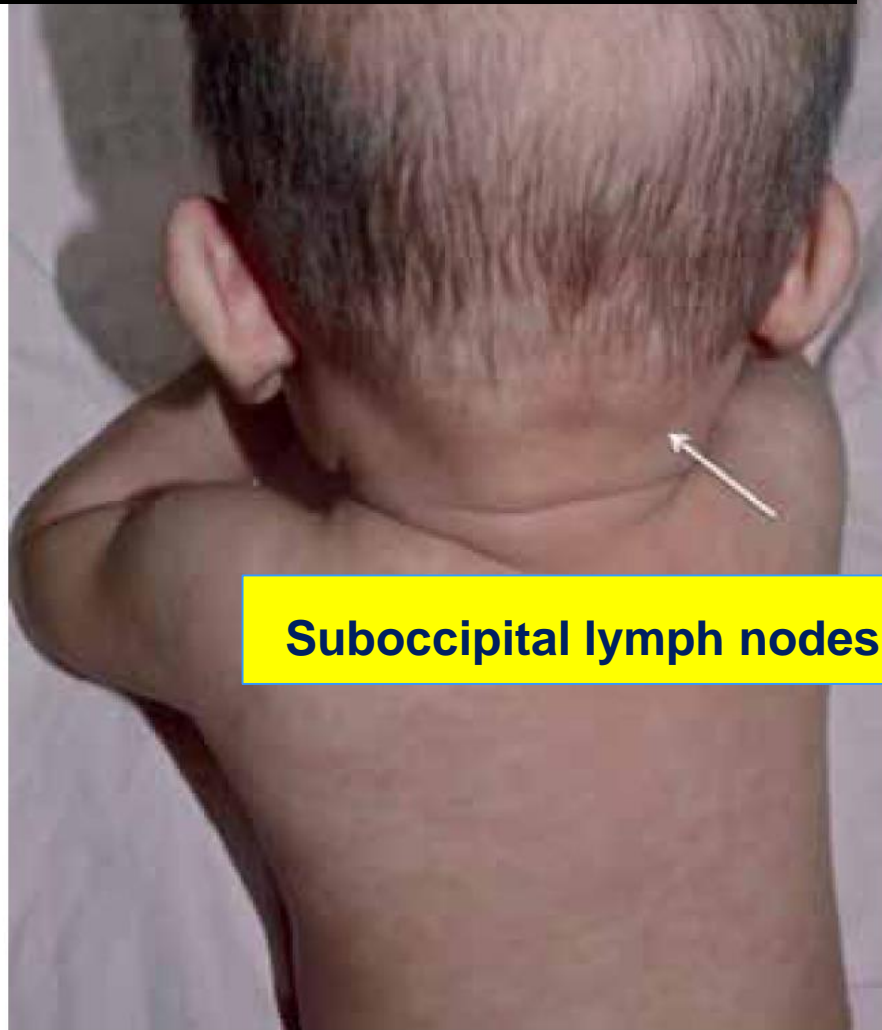
RUBELLA

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Forchheimer's spots

RUBELLA



Suboccipital lymph nodes

FIG 1. Photograph of a 2-year-old boy with rubella showing bilateral suboccipital lymph nodes and a maculopapular rash on the back. One of the lymph nodes is indicated by a white arrow



Posterior auricular lymph nodes

RUBELLA

RASH

The rash starts from the face area.
However, while rash appear on the trunk,
the facial lesions disappears.
Maculopapular rash spread all over the body in 24 hours.
The rash resembles a scarlet rash on the second day,
especially on the trunk.
On the third day, the rash completely disappear.
Usually, there is no high fever.

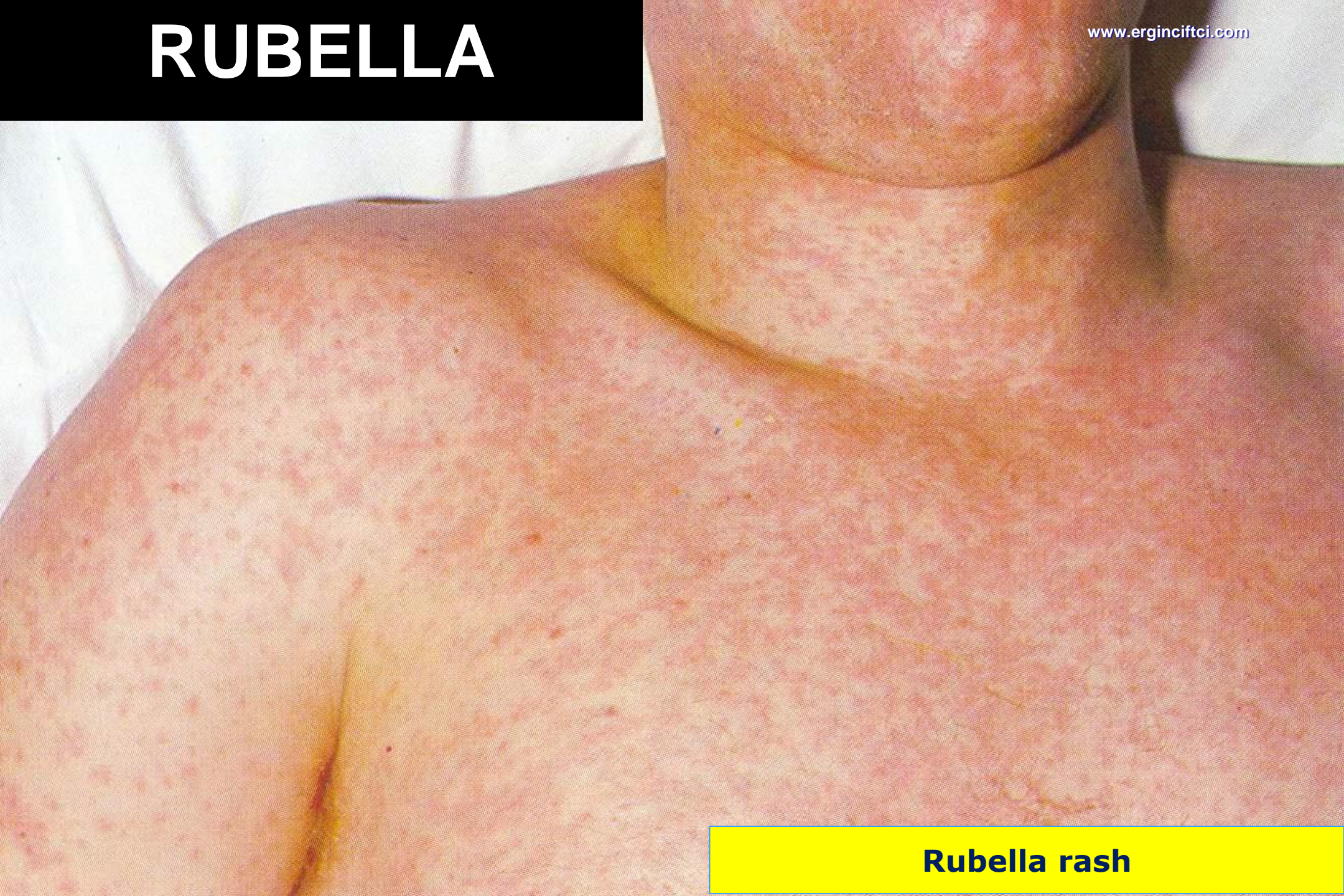
RUBELLA



Rubella rash

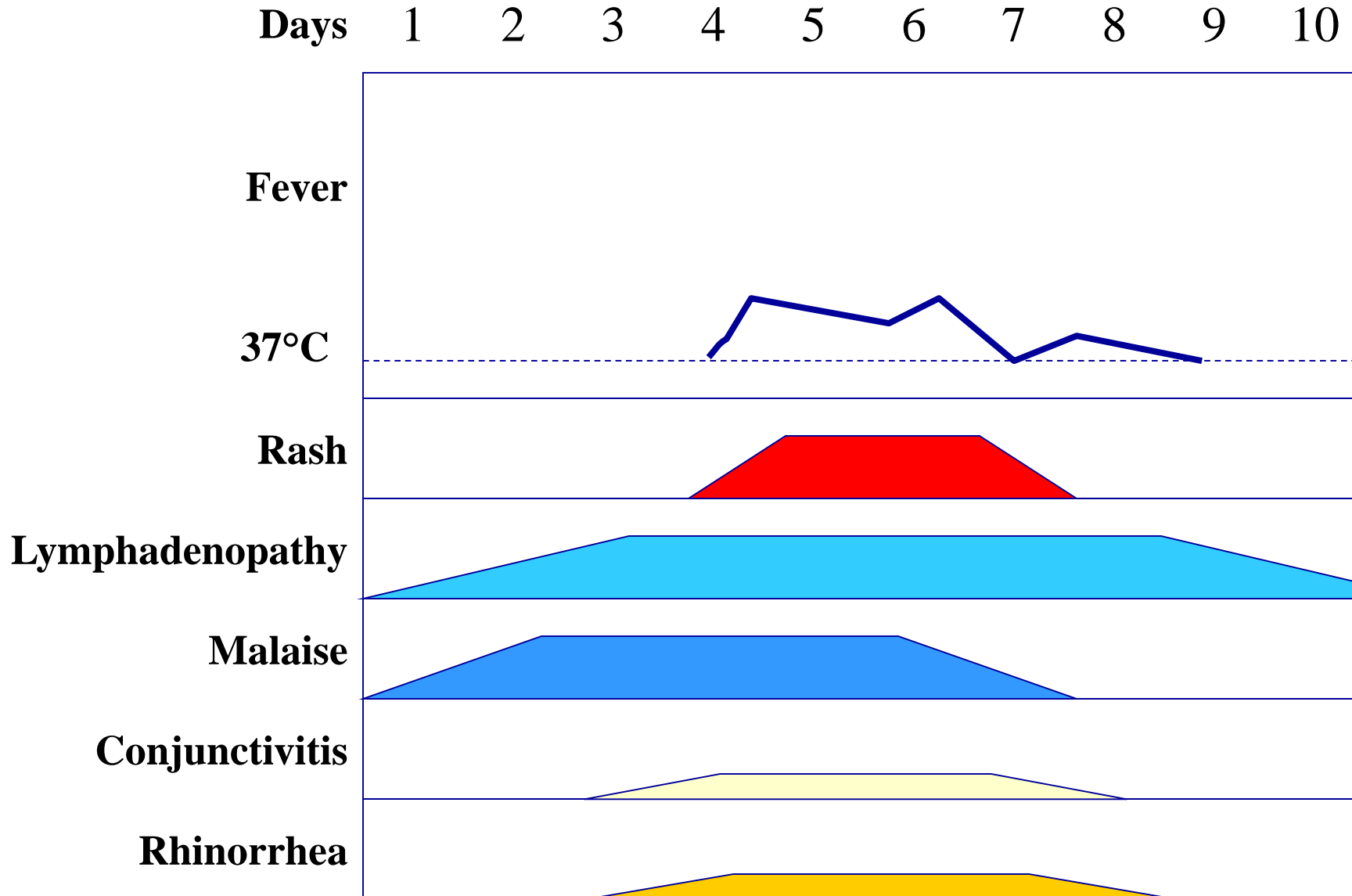
RUBELLA

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Rubella rash

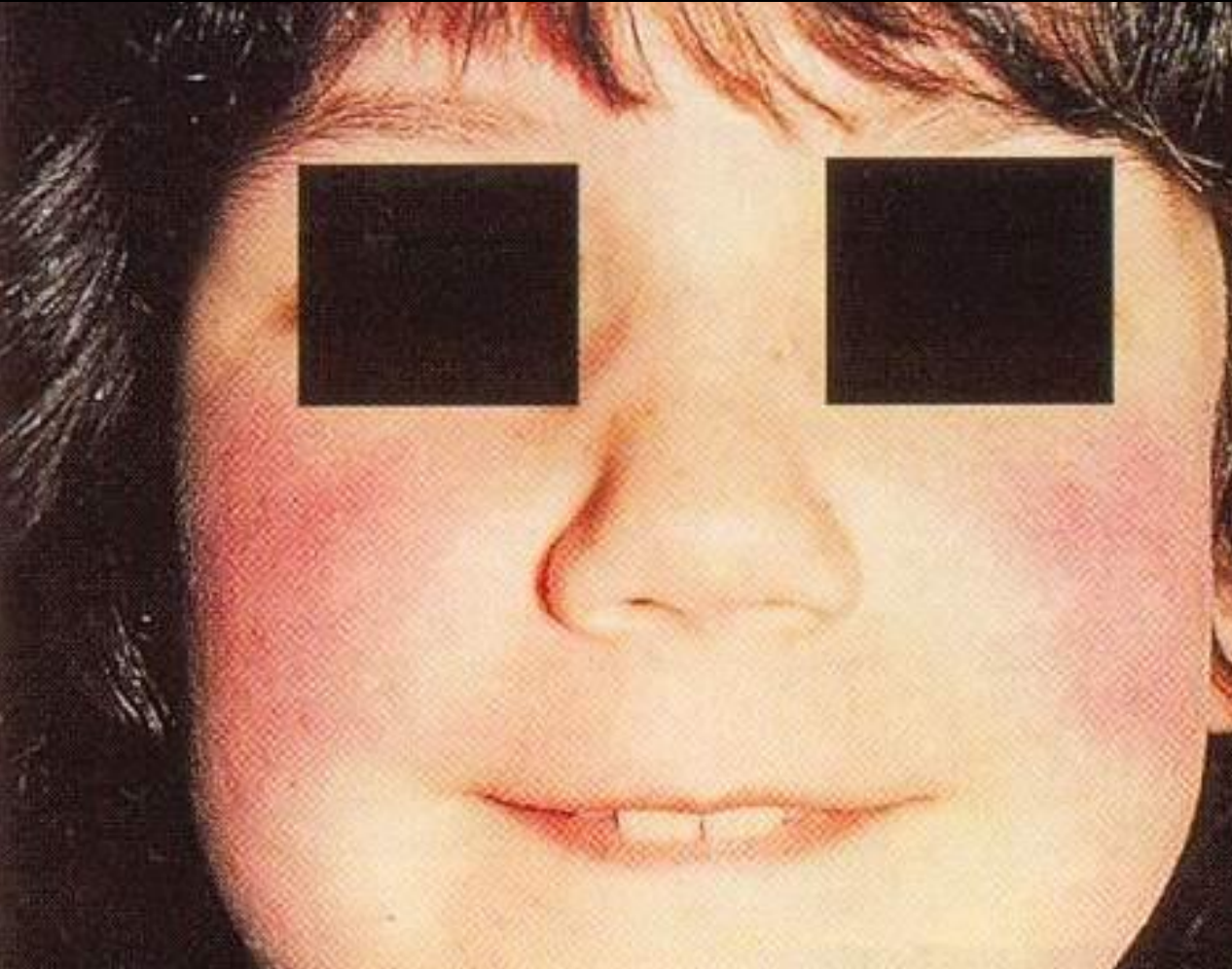
RUBELLA



FIFTH DISEASE

Erythema Infectiosum

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“Slapped cheek” rash



Fifth disease «Lacy» rash

SIXTH DISEASE

Roseola infantum

(Exanthema subitum)

RASH

When the fever falls, a rash appears

It is maculopapular

Starts from the trunk and spreads

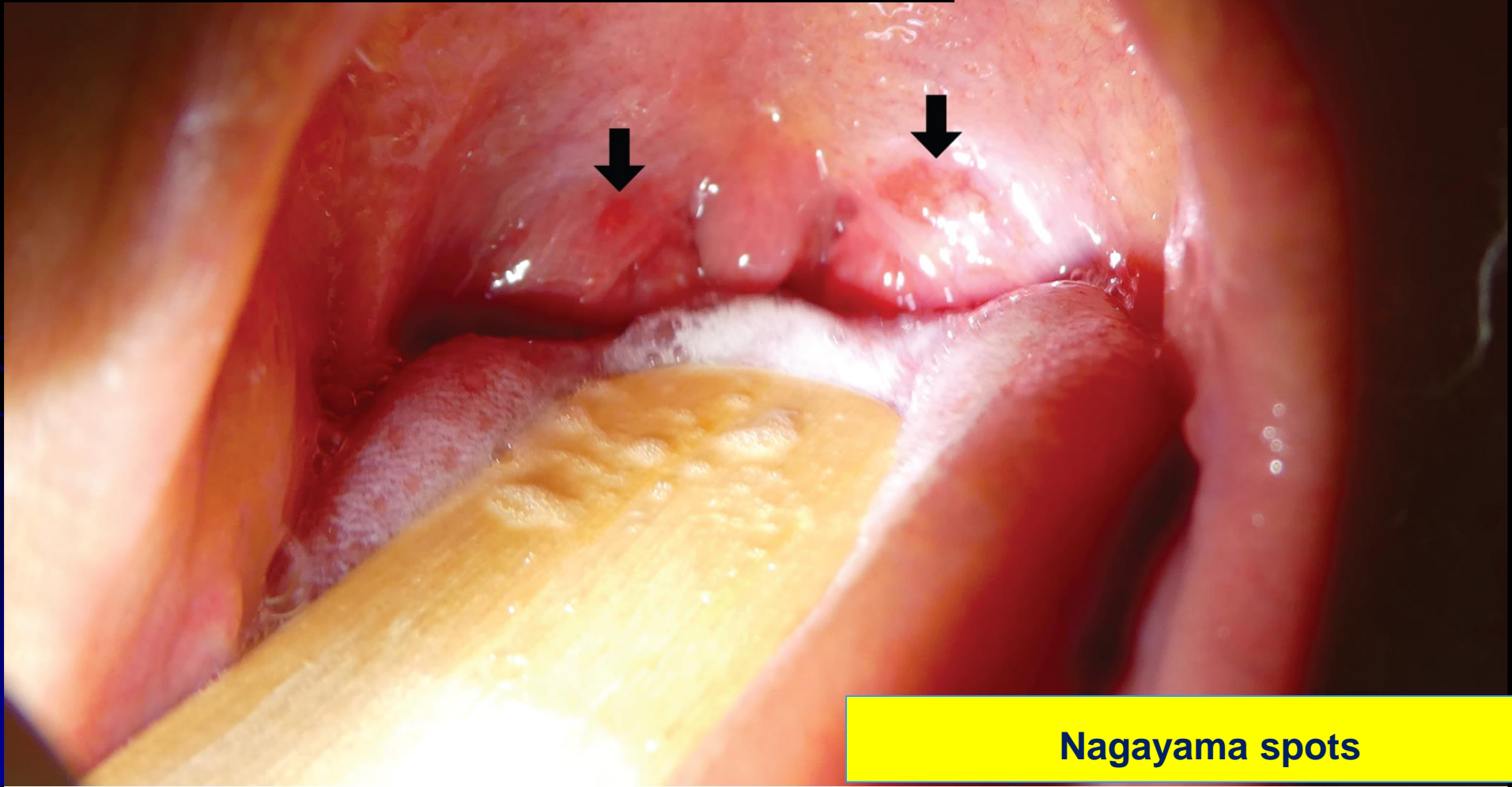
It is short-lived (may take 1-3 days)

In Asian countries, ulcers can be seen at the uvulopalatoglossal junction (**Nagayama** spots)

SIXTH DISEASE

Roseola infantum (Exanthema subitum)

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Nagayama spots

SIXTH DISEASE

Roseola infantum (Exanthema subitum)



Sixth disease rash

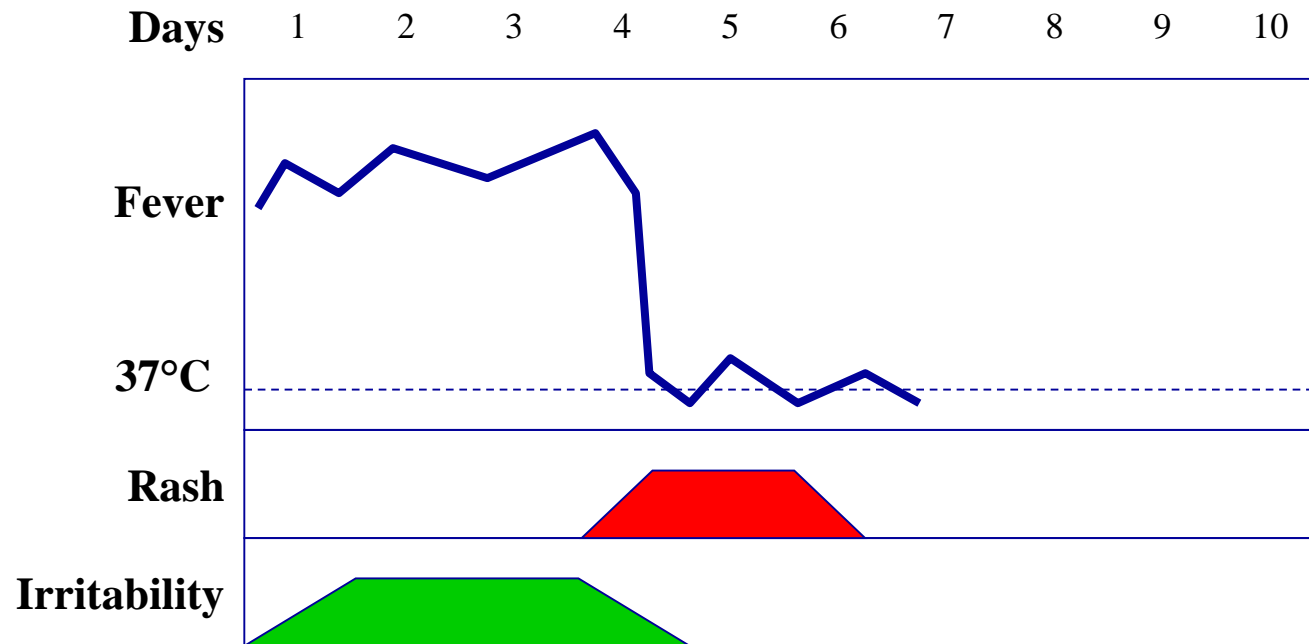


Sixth disease rash

SIXTH DISEASE

Roseola infantum

(Exanthema subitum)



CHICKENPOX



Polimorph rash

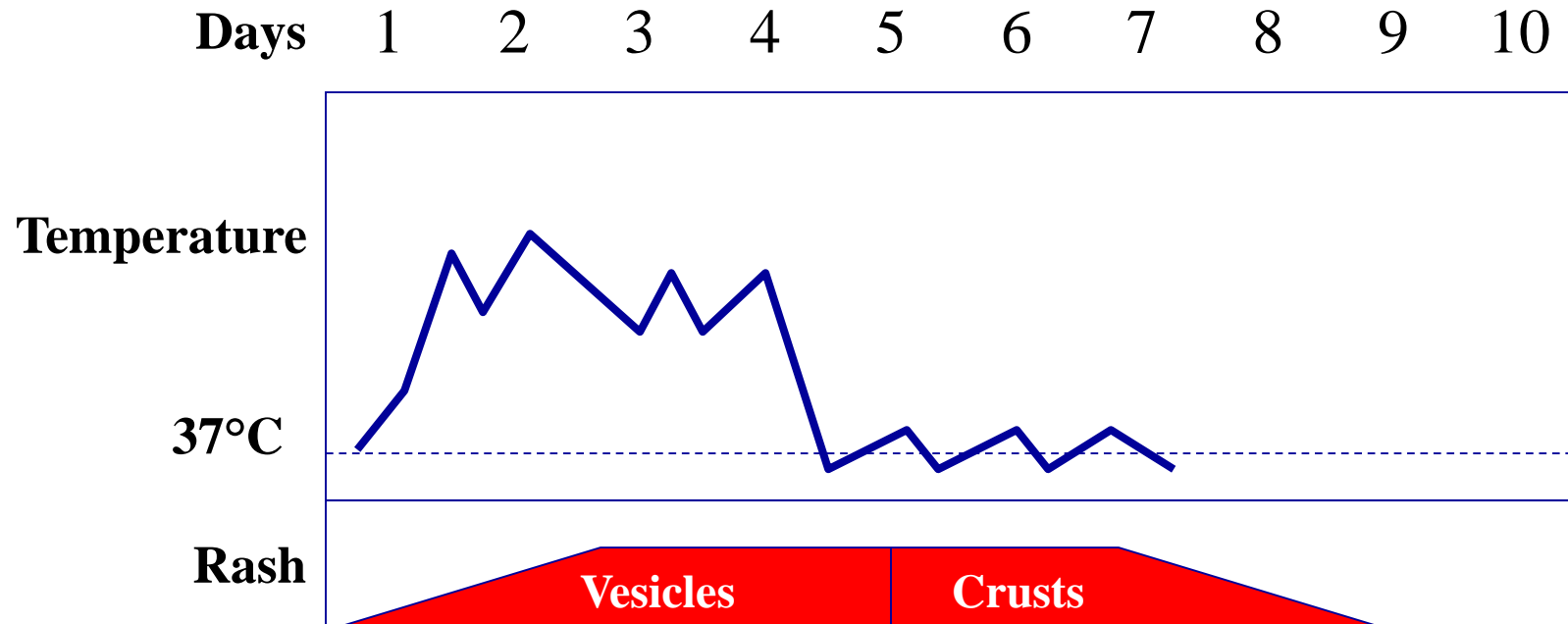


Oral chickenpox lesions



Severe chickenpox rash

CHICKENPOX



CHICKENPOX

Herpes zoster



Herpes zoster



Herpes zoster

EXANTHEMATOUS DISEASES

Infectious Period

Measles: Begins 3 days before rash, lasts up to 4-6 days of rash

Scarlet Fever: Highest during acute infection, it then subsides and lasts for weeks.
With appropriate antibiotic treatment, not contagious after 24 hrs.

Rubella: Begins 7 days before rash, lasts up to 7 days after the rash appears
The newborns with congenital rubella can spread the virus with nasopharyngeal secretions and urine for up to 1 year.

Fifth Disease: Contagious before the rash appears, not contagious after rash begins
Patients with aplastic crisis contagious for 1 week

Sixth Disease: Contagious permanently

Chickenpox: Begins 1-2 days before rash, lasts until all the vesicles have crusted



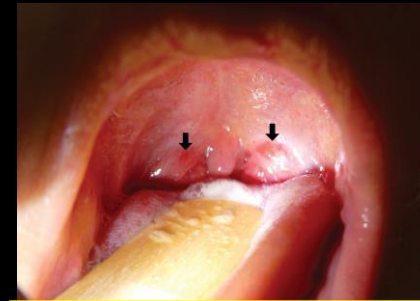
Koplik's spots



Red strawberry tongue



Forchheimer's spots



Nagayama's spots



Oral chickenpox lesions

EXANTHEMATOUS DISEASES

Treatment

Measles: Vitamin A

Scarlet Fever: Penicillin

Rubella: None

Fifth Disease: None, IVIG in some cases

Sixth Disease: None

Chickenpox: Acyclovir



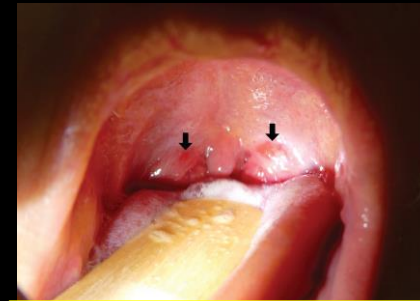
Koplik's spots



Red strawberry tongue



Forchheimer's spots



Nagayama's spots



Oral chickenpox lesions

EXANTHEMATOUS DISEASES

Vaccine

Measles: MMR vaccine, MMRV vaccine

Protective if given within the first **72 hours** after contact

Scarlet Fever: None

Rubella: MMR vaccine, MMRV vaccine

Fifth Disease: None

Sixth Disease: None

Chickenpox: Varicella vaccine

After chickenpox exposure, can be given in the first **3-5 days**.



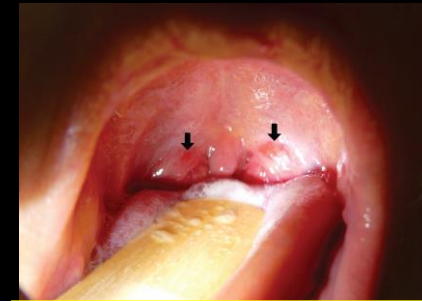
Koplik's spots



Red strawberry tongue



Forchheimer's spots



Nagayama's spots



Oral chickenpox lesions

EXANTHEMATOUS DISEASES

Immunglobulin for Prevention

Measles: Yes. Protective if given within the first **6 days** of exposure

Scarlet Fever: None

Rubella: Yes (Only for pregnant)

Fifth Disease: None

Sixth Disease: None

Chickenpox: IVIG, VZIG (For immunocopromised children and adults)

Protective if given within the first **10 days** of exposure



Koplik's spots



Red strawberry tongue



Forchheimer's spots



Nagayama's spots



Oral chickenpox lesions

YOU'RE GOING
TO GET THE
MEASLES!

FORTUNE
TELLER

