

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of **ALLAH**
the most Beneficent and the most merciful



COMMUNICABLE DISEASES-2

RUBELLA (GERMAN MEASLES)

MUMPS

RUBELLA (GERMAN MEASLES)

- It is an acute childhood infection
- It is usually mild & of short duration (approximately 3 days)
- It is accompanied by low grade fever, lymphadenopathy & a maculopapular rash

RUBELLA (GERMAN MEASLES)

- Infection in early pregnancy may result in serious congenital defects or foetal death
- The disease is worldwide in distribution and tends to occur in epidemics every 6 to 8 years

RUBELLA (GERMAN MEASLES)

AGENT FACTORS

- a) **AGENT:** Rubella is caused by an RNA virus of the togovirus family. Only one antigenic type exists. The virus has been recovered from naso-pharynx, throat, blood, CSF and urine. It can be propagated in cell cultures

RUBELLA (GERMAN MEASLES)

(AGENT FACTORS)

- b) SOURCE OF INFECTION: *Clinical or subclinical cases.* A large number of rubella infections are, in fact, subclinical. *There is no known carrier state.* Infants born with congenital rubella may shed the virus for many months

RUBELLA (GERMAN MEASLES)

- c) PERIOD OF COMMUNICABILITY:**
It extends from a week before symptoms to about a week after the rash appears. Infectivity is greatest when the rash is erupting. Rubella is much less communicable than measles.

RUBELLA (GERMAN MEASLES)

HOST FACTORS

- a) AGE: Mainly a disease of childhood particularly in the age group 3-10 years. Persons older than 15 years now account for over 70 per cent cases in developed countries, following widespread immunization campaigns against the disease

RUBELLA (GERMAN MEASLES)

HOST FACTORS

- b) IMMUNITY: One attack results in life-long immunity. Infants of immune mothers are protected for 4-6 months. It is estimated that 10-40% of the population could reach adulthood without experiencing rubella infection. Thus many CBA women may remain rubella susceptible

RUBELLA (GERMAN MEASLES)

ENVIRONMENTAL FACTORS

Disease usually occurs in seasonal pattern during later winter and spring with epidemics every 4-9 years

RUBELLA (GERMAN MEASLES)

TRANSMISSION

The virus is transmitted directly from person to person by droplets from nose and throat, and indirectly by droplet nuclei, from one week before the onset of rash to one week after it has faded.

The portal of entry is the respiratory tract.

RUBELLA (GERMAN MEASLES)

TRANSMISSION

The virus is maintained in human population by chain transmission. The virus can cross the placenta (vertical transmission) and infect the foetus *in utero*, leading to congenital rubella in the newborn

RUBELLA (GERMAN MEASLES)

INCUBATION PERIOD

2-3 weeks, average 18 days

CLINICAL FEATURES

A large percentage of infections (50-65%) are asymptomatic. In a typical case the clinical features comprise the following:

RUBELLA (GERMAN MEASLES)

- (a) Prodromal Symptoms; coryza, sore throat & fever
- (b) Lymphadenopathy; enlargement of posterior auricular and posterior cervical lymph nodes appears as early as 7 days before the appearance of rash

RUBELLA (GERMAN MEASLES)

(c) Rash; The rash is often the first indication of the disease in children. It appears first on the face, usually within 24 hours of the onset of prodromal symptoms. It is a minute, discrete, pinkish, macular rash which is not confluent in contrast to measles.

RUBELLA (GERMAN MEASLES)

The rash spreads rapidly to the trunk and extremities and fades from face downwards in three days. The rash is an inconstant feature of the disease. Rash is absent in subclinical cases.

RUBELLA (GERMAN MEASLES)

(d) Complications: In rare instances *arthralgia* may occur in several joints in adults, especially young women.

Encephalitis is very rare.

Thrombocytopenic purpura has also been observed as a complication.





RUBELLA (GERMAN MEASLES)

CONGENITAL RUBELLA SYNDROME (CRS)

- It refers to infants born with defects secondary to intrauterine infection
- Congenital infection is considered to have occurred if the infant has IgM rubella antibodies shortly after birth

RUBELLA (GERMAN MEASLES)

(CONGENITAL RUBELLA SYNDROME)

- Rubella infection inhibits cell division and this is probably the reason for congenital defects and LBW
- The classic triad of congenital defects are deafness, cardiac malformations and cataracts

RUBELLA (GERMAN MEASLES)

(CONGENITAL RUBELLA SYNDROME)

- Others resulting defects include glaucoma, retinopathy, cerebral palsy, microcephaly, intrauterine growth retardation, hepatosplenomegaly, mental and motor retardation

RUBELLA (GERMAN MEASLES)

(CONGENITAL RUBELLA SYNDROME)

- Congenital rubella is a chronic infection. Foetus remains infected throughout gestation and for months and sometimes years postnatally

RUBELLA (GERMAN MEASLES)

(CONGENITAL RUBELLA SYNDROME)

- The first trimester of pregnancy is the most disastrous time for the foetus as the organs are developing. Infection during this period results in abnormalities in the infant in about 85% of the cases

RUBELLA (GERMAN MEASLES)

(CONGENITAL RUBELLA SYNDROME)

- If the infection is severe spontaneous abortion or stillbirth may occur or the infant may develop multiple defects such as the classical triad of patent ductus arteriosus, cataract and deafness
- Birth defects are uncommon if maternal infection occurs after 20 weeks of pregnancy

RUBELLA (GERMAN MEASLES)

PREVENTION

Active immunization against rubella is now possible with live attenuated vaccine. The goal of rubella vaccination is the prevention of rubella infection during a future pregnancy.

RUBELLA (GERMAN MEASLES)

(PREVENTION)

RA 27/3 vaccine is administered in a single dose of 0.5 ml S/C. Seroconversion occurs in more than 95% of vaccinees. Immunity lasts for at least 14-16 years & probably is life long. **Infants and pregnant women should not be vaccinated**

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Have a break, have a Kit-Kat