# **CHICKENPOX (VARICELLA)**



BY

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- Varicella (chickenpox) is an acute, highly contagious disease caused by varicella-zoster virus (VZV), a member of the herpesvirus family.
- Following infection, the virus remains latent in neural ganglia and in about 10-20% of cases it is reactivated to cause herpes zoster, or shingles, generally in persons over 50 years of age or immunocompromised individuals.

## **EPIDEMIOLOGY**

Primary varicella infection (chickenpox) was not reliably distinguished from smallpox until the end of the 19th century.

Varicella occurs throughout the year in temperate regions, but the incidence typically peaks in the months of March through May. According to national seroprevalence data from the prevaccine era, greater than 95 percent of persons in the United States acquired varicella before 20 years of age, and fewer than 2 percent of adults were susceptible to infection .Prior to 1995 the Centers for Disease Control and Prevention (CDC) estimated the yearly incidence of chickenpox in the United States at approximately four million cases, with nearly 11,000 admissions and 100 deaths.



Humans are the only source of infection for this virus .The virus spreads easily from people with chickenpox to others who have never had the disease or received the chickenpox vaccine.

 VZV transmission occurs via droplets, aerosols, or direct contact with respiratory secretions, It can also be spread by touching or breathing in the virus particles that come from chickenpox blisters and almost always produces clinical disease in susceptible individuals.



While mostly a mild disorder in childhood, varicella tends to be more severe in adults. It may be fatal, especially in neonates and in immunocompromised persons.

The rates of infection, hospitalizations, and mortality have all declined in the US since the introduction of the varicella vaccine in 1995; immunization is recommended in all children before the age of five years and in nonimmune adults.



### The incubation period

10–21 days most commonly 14–16 days.

### Period of communicability

As long as 5 days, but usually 1-2 days before onset of rash and continuing until all lesions are crusted, typically 4–7 days after onset of rash in immunocompetent people.

Recovery from primary varicella infection usually results in lifetime immunity. In otherwise healthy persons, a second occurrence of varicella is uncommon; it is more common in immunocompromised persons. Immunity following varicella infection is considered to be long-lasting and second cases of varicella are thought to be rare.

## **CLINICAL FEATURES**

• Chickenpox most commonly causes an illness that lasts about 5-10 days.

- A mild prodrome of fever and malaise may occur 1 to 2 days before rash onset, particularly in adults. In children, the rash is often the first sign of disease.
- The classic symptom of chickenpox is a rash that turns into itchy, fluid-filled blisters that eventually turn into scabs. The rash may first show up on the face, chest, and back then spread to the rest of the body, including inside the mouth, eyelids, or genital area. It usually takes about one week for all the blisters to become scabs.
- Children usually miss 5 to 6 days of school or childcare due to their chickenpox.



- Some people who have been vaccinated against chickenpox can still get the disease. However, the symptoms are usually milder with fewer blisters and mild or no fever.
- Recovery from primary varicella infection usually results in lifetime immunity. In otherwise healthy persons, a second occurrence of varicella is uncommon; it is more common in immunocompromised persons.
- About 25% to 30% of vaccinated people who get chickenpox will develop illness as serious as chickenpox in unvaccinated persons.

### **VARICELLA COMPLICATIONS**

- Bacterial infection of skin lesions
- Pneumonia
- Central nervous system manifestations
- Reye syndrome (rare)

## **RISKY GROUP**

- Infants
- Adolescents
- Adults
- Pregnant women
- People with weakened immune systems because of illness or medications; for example,
- People with HIV/AIDS or cancer
- Patients who have had transplants, and
- People on chemotherapy, immunosuppressive medications, or long-term use of steroids..

### PREVENTION

- The best way to prevent chickenpox is to get the chickenpox vaccine.
  Children, adolescents, and adults should have two doses of chickenpox vaccine.
- A live, attenuated varicella vaccine was developed in Japan in the 1970s.
- Chickenpox vaccine is very safe and effective at preventing the disease. Most people who get the vaccine will not get chickenpox. If a vaccinated person does get chickenpox, it is usually mild—with fewer blisters and mild or no fever. The chickenpox vaccine prevents almost all cases of severe disease.



- CDC recommends two doses of chickenpox vaccine for children, adolescents, and adults. Children should receive two doses of the vaccine—the first dose at 12 through 15 months old and a second dose at 4 through 6 years old.
- Varicella Vaccine Efficacy is 82% for dose 1 and 92% for dose 2
- Varicilla zoster Ig given 96 hours after exposure to prevent serious course.

## CONTRAINDICATION

- Severe allergic reaction to vaccine component or following a prior dose
- Immunosuppression due to leukemia, lymphoma, generalized malignancy, immune deficiency disease, or immunosuppressive therapy
- HIV infection
- Pregnancy

- - Isolation : exclude children from school(after the vesicle dry and crusted usually 5 days in non immunized children and 1-4 days in immunized.

- Quarantine: usually none
- Specific treatment : antiviral therapy.

