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Infectious diseases

Infectious disease “ definitions

Disease is a pathological condition of body part or tissue •
characterized by an identifiable group of signs and symptoms

Infectious disease disease caused by an infectious agents such as bacterium ,viruses ,protozoan or fungus

Infection occur when an infectious agents enters the body and begins to reproduce , may or may not lead to disease

Pathogen an infectious agent that causes disease

host an organism infected by another organism

Virulence the relative ability of an agent to cause rapid and severe disease in a host

Infectious disease agents

Most infectious agents that cause disease are microscopic in size and ❖ thus called microbes or microorganisms

Different groups of agents that cause disease are ❖

Bacteria •

Viruses •

Protozoa •

helminths •

By which mechanisms those agents cause disease???

- 1- Production of poisons such as toxin enzymes that destroy cells and tissues •
- 2- Direct invasion and destruction of host cells •
- 3- Triggering responses from the hosts immune system .1
Leading to disease signs and symptoms •

Phases of infectious agents

Incubation period : time between infection and the appearance of ❖ signs and symptoms

Prodromal phase : mild .nonspecific symptoms that signal onset of ❖ some disease

Clinical phase : a person experiences typical signs and symptoms of ❖ disease

Decline phase : subsidence of symptoms ❖

Recovery phase : symptoms have disappeared .tissue heal and the ❖ body regained strength

Classification of infectious disease

by duration ➤

Acute : develops and runs its course quickly ➤

Chronic : develops more slowly and is usually less severe, but may persist for a long, indefinite period of time ➤

Latent : characterized by period of no symptoms between outbreaks of illness ➤

By location ➤

Local : confined to a specific area of the body ➤

Systemic : a generalized illness that infects most of the body with pathogen distributed widely in tissue ➤

By timing ➤

Primary; initial infection in a previously healthy person ➤

Secondary : infection that occurs in a person weakened by primary infection ➤



11.45 Cutaneous leishmaniasis. **A** Papule. **B** Ulcer. *B, Courtesy of Dr Ravi Gowda, Royal Hallamshire Hospital, Sheffield.*

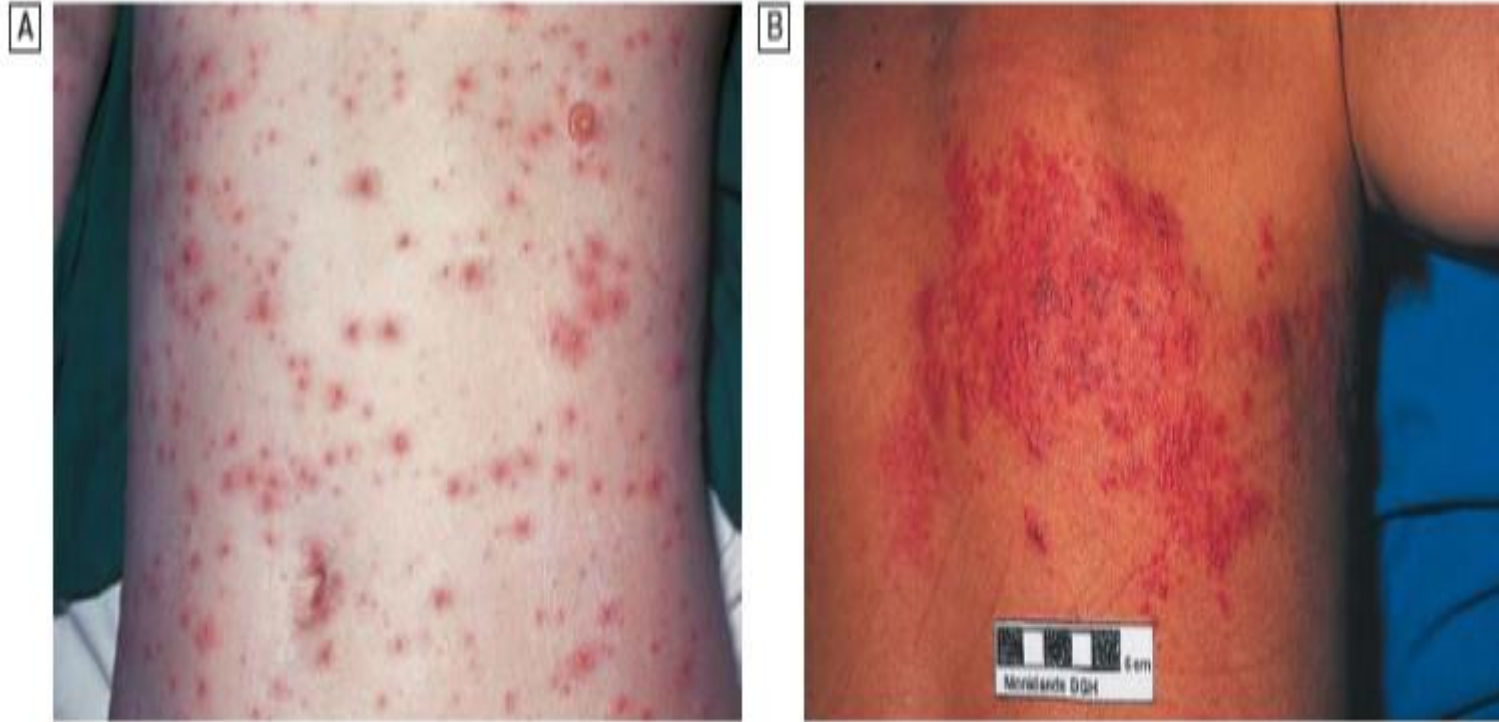


Fig. 11.10 *Varicella zoster virus* infection. **A** Chickenpox. **B** Shingles in a thoracic dermatome.

Example of infectious disease

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. •

Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. •

The virus can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, sing or breathe. •

Keep yourself and others safe

Get **vaccinated** as soon as it's your turn and follow local guidance on vaccination. •

Keep **physical distance** of at least 1 metre from others, even if they don't appear to be sick. Avoid crowds and close contact. •

Wear a properly fitted **mask** when physical distancing is not possible and in poorly ventilated settings. •

Clean your hands frequently with alcohol-based hand rub or soap and water. •

Cover your mouth and nose with a bent elbow or tissue when you cough or sneeze. Dispose of used tissues immediately and clean hands regularly. •

If you develop symptoms or test positive for COVID-19, **self-isolate** until you recover. •

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In general factors for reducing the spread of infectious disease

Vaccines

Drugs

Good personal hygiene

quarantine

Infectious disease as a cause of death

Infectious diseases are responsible for a quarter to a third of all ❖ deaths worldwide

Infectious diseases account for more than half of all death in children ❖ under age of 5

The top single agent killer are HIV/ADS. Malaria and TB , followed by ❖ lower respiratory infections and diarrheal diseases

Thank you •

