

First Semester Basics of Surgery

SPECIFIC INFECTIONS



Sawa University

College of health and medical techniques

Department of Anesthesia

Stage: Second

جامعة ساوة الاهلية

كلية التقنيات الصحية والطبية

قسم تقنيات التخدير

المرحلة: الثانية

محاضرة رقم: 10

Lecture No. 10

نظري

Theoretical

استاذ المادة : م.م. رباب سمير كاظم

❖ Infection

Invasion and replication of microorganisms or pathogen into the tissue following breakdown of local and systemic body defense. **Local body defense is the skin and mucous membrane. Systemic body defense is the immune system, Such pathogen or microorganism** could be bacteria, virus or fungus.

❖ Infectious disease

Disease in which the pathogen transmit or spread from person to person.

Infection

➤ Mode of transmission of pathogens:

- 1- Skin contact.
- 2- Contact with bodily fluids
- 3- Ingesting contaminated food or water.
- 4- Inhaling airborne particles or droplets.
- 5- Touching an object that a person carrying the pathogen has also touched

Infection

➤ Prevention

1. Hand hygiene before patient contact, putting the protective equipment, performing any procedure and after doing these jobs.
2. Clean surface areas by simple mechanical removal and by killing the pathogen with chemicals.
3. Disinfection which is the use of liquid chemicals on surfaces to kill the pathogen.
4. Sterilization which is a process of killing the microorganisms including spores.
5. Personal protective equipment PPE which are specialized equipment worn by a worker like the face mask, caps and gowns.
6. Vaccination against certain diseases.

Specific infection

Tuberculosis TB

- 1-** Is fatal contagious disease that affects the lungs and other part of body which is a public health problem.
- 2-** It is curable and preventable disease.

Causative organism

Bacteria (Mycobacteria tuberculosis).

Specific infection

Tuberculosis TB

■ Types

1. Pulmonary TB which is the commonest type.
is a contagious bacterial infection that involves the lungs
2. TB of the bone and the joint.
3. TB of the central nervous system.

Specific infection

Tuberculosis TB

- **Mode of transmission (pulmonary TB)**

Airborne: is from person to person through the air, when people with lung TB cough, sneeze or spit the TB germs into the air. A person needs to inhale only a few of these germs to become infected.

Specific infection

Tuberculosis TB

■ Symptoms and signs

- 1- Cough for more 3 weeks.
- 2- Chest pain.
- 3- Coughing up blood.
- 4- Night sweats.
- 5- Night fever.

Specific infection

Tuberculosis TB

■ Treatment

Antibiotics:

- 1-** A combination of more than one antibiotics
- 2-** The treatment protocol is from six to twelve months, considering the periodic examination of liver function.

■ Prevention

- 1-** BCG Vaccine
- 2-** Personal hygiene.
- 3-** Environment sanitation.

Bacillus Calmette-Guerin

Specific infection

Tetanus

is a **dangerous disease** caused by a bacteria called **clostridium tetani** which is:

1- Spore forming:

The bacteria surrounds itself with a sheath called spores, which gives it resistance to heat, drought, and many sterilizers.

These spores are found everywhere in the environment, in almost everything that surrounds us.

2- Anaerobic.

3- Producing toxin.

Specific infection

Tetanus

▪ Mechanism of infection

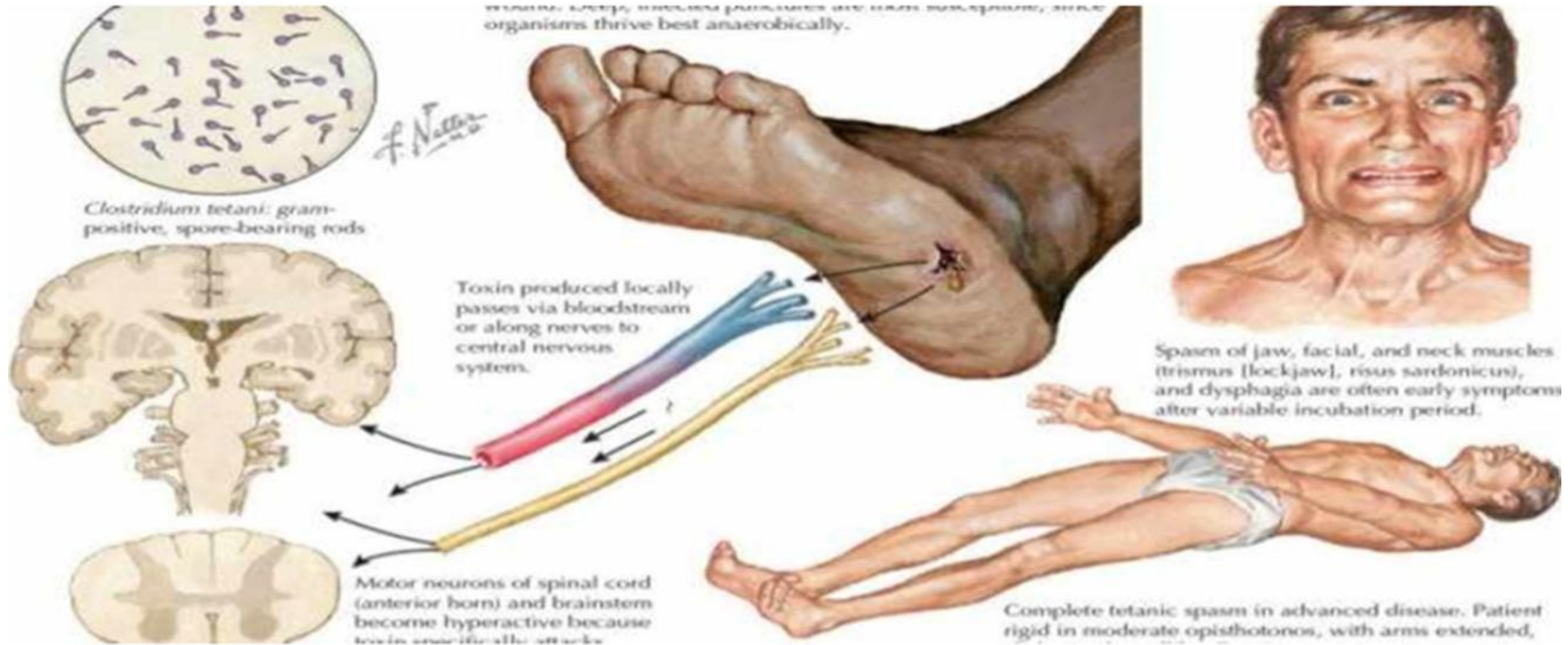
When a person gets an injury, the wound is poorly ventilated, and the **tetanus bacteria are anaerobic**. It enters the human body, activate and begin to spread toxins which is one of the **most dangerous types of toxins called tetanospasmin**, This toxin travels from the affected area to the spinal cord of the affected person and binds to the nervous system and initiates symptoms. **All this happens within 2-14 days.**

This toxin is responsible for contractions of the muscles of the entire body in addition to the pain that occurs with these spasms.

Specific infection

Tetanus

■ Mechanism of infection



Specific infection

Tetanus

■ Types

1- Generalized tetanus: It is a full body muscle spasm.

2- Cephalic tetanus: This results from an external injury to the head, and most often only the seven nerves are injured. It can turn into a generalized tetanus.

3- Localized tetanus: It affects one muscle or a group muscles in one part of the body.



Specific infection

Tetanus

- Types

4- Neonatal tetanus: Tetanus infection occurs during childbirth, due to non-sterilization of surgical instruments, or not take the tetanus vaccine during pregnancy.





THANK YOU

م.م. رباب سمير كاظم