

wound healing:

Wound healing: Is a complex biologic process that is described as discrete phases to facilitate understanding of the overall process.

Cellular components of wound healing include platelets, neutrophils, monocytes, macrophages, endothelial cells, fibroblasts, myofibroblasts and keratinocytes. And also there are mediators include growth factors, cytokines Chemokines. Growth factors are proteins that bind to cell surface for activation and proliferation and \ or differentiation. Cytokines & chemokines are small signaling proteins that are secreted by variety of cell type's .cytokines have growth, differentiation and activation functions that regulate and determine nature of immune response. chemokines are cytokines with particular chemotactic function.

Phases of wound healing:

1-inflammatory phase.

2-proliferative phase.

3-maturation phase.

Inflammatory phase includes initiation of inflammation (vascular & cellular changes) followed closely by removal of contaminants and damaged or dead tissue.

Proliferative phase represents the phase of repair of wounded tissue.

Maturation phase sometimes termed remodeling phase dominated by reorganization of collagen and return to same level of prewound tissue strength .

N.B

Details of wound healing phases will be continued later on.

Complications of wound healing:

1-Bleeding.

2-Syncope: temporary unconsciousness due to anemia ,heart stops suddenly may be due to severe bleeding or a reflex action during rough manipulation .

3-Shock:a state in which the amount of oxygen delivered to the tissues is inadequate to maintain normal cellular respiration. the animal is unconscious.

4- Traumatic neuralgia.

A-primary neuralgia: pain at the wound area which persist for abnormal period may be local at the wound area or extend along the nerve in the injured region.

B-secondary neuralgia: pain appears at the time of scar formation, might be limited at the wound or extends to the surroundings.

5-Damage to nerve.

May cause paralysis to the muscles supplied with that nerve or loss of sensation , may be temporary or permanent depending on degree of injury.

6-Traumatic emphysema.

Occurs due to tissue infiltration with air or gas ,it occurs in penetrating wounds .there is limited soft swelling ,painless ,crepitating .un harmful unless infection supervene especially when the gas comes from the digestive tract.

7-Traumatic fever.

Fever occurs due to toxins absorbed from the wounded area.

8-Cellulitis.

Spread of infection in the connective tissue subcutaneously , the affected area tends to suppurate and necrotize ,the wound edges are swollen ,hot ,painful, superficial lymphatic's are prominent with fever and anorexia.

9-Erysipelas.

Infectious disease affects skin and subcutaneous tissue caused by streptococcus infecting the wound. Occurs in equine, dogs, ovine, and workers in pig stables. There are two forms of the disease:

A-Cutaneous form: There is hot painful extensive swelling spreads quickly may be accompanied with lymphadenitis and lymphangitis .

b-Phlegmonous and gangrenous form.

In the phlegmonous there is extensive suppuration, fever, anorexia with bad prognosis. While in the gangrenous there are signs of moist gangrene

10- Septicemia & pyemia.

11-Venous thrombosis and embolism: Venous thrombosis occurs frequently because blood flow is slower it occurs due to phlebitis in the vein that passes through the wounded area

12- Gas gangrene.

Rarely occurs, happens in deep tortuous wound infected with anaerobs.