

1-A biopsy was taken from a patient and it was not cancer. Instead, they found out that it was chronic inflammation, what did they see?

- a-Fibrosis, macrophages, lymphocytes, plasma cells
- b-Neutrophils and macrophages
- c-Eosinophils
- d-Histamine and Heparin

Answer: a

2-A hunter is present with skin rash after direct contact with mushroom. Tests show that no microorganisms are involved but show also a huge number of IgE and mast cells. What is the right diagnosis?

- a-Parasitic infection
- b-Bacterial infection
- c-Autoimmune disease
- d-Acute allergic reaction

Answer: d

3-IL-17 is mainly responsible for:

- a-Neutrophil recruitment
- b-Macrophage maturation
- c-T cells maturation
- d-Eosinophil recruitment

Answer: a

4- A specimen shows granuloma with caseous necrosis, which of the following is correct?

- a-It is an acute inflammation
- b-Using acid-fast stain most likely won't do anything
- c-You should rule out tuberculosis
- d-It is probably of unknown etiology

Answer: c

5-Which of the following is true regarding toll like receptors?

- a-They circulate in the blood
- b-Collectins are examples
- c-They are essential for chemotaxis

d-They recognize PAMPs

Answer: d

6-Which of the following is true regarding inflammation?

- a-It is essential for body survival
- b-Strong inflammatory responses are always good
- c-Non-vascularised tissues can get inflamed
- d-There is no repair step in inflammation

Answer: a

7-Opsonization is best described as:

- a-Recognizing the pathogen
- b-Coating the microbe to enhance phagocytosis
- c-Following a specific chemical gradient
- d-Activation of the complement system

Answer: b

8-Which of the following statements is true regarding these pictures?

- a-The cell on the left is a monocyte
- b-The cell on the left has half-life of 1-2 days
- c-The cell on the right is a neutrophil
- d-Both cells have the same half-life



Answer: b

9-Which of the following statements is true regarding steroids?

- a-They are potent inhibitors of phospholipases
- b-They are inhibitors of COX-1
- c-They induce immunity
- d-They are considered as pro-inflammatory drugs

Answer: a

10-Which of the following is true regarding M2 pathway?

- a-It is also called the classical pathway
- b-It is activated by the presence of microbes
- c-It stops inflammation and promotes repair

d-Macrophages start producing IL-1 and chemokines

Answer: c

11-Which of the following is considered an anaphylatoxin?

a-C5A

b-C3B

c-IgG

d-NO

Answer: a

12-A liver biopsy showed that a patient has a noncaseating granuloma. Which of the following disease can cause this condition?

a-Tuberculosis

b-Sarcoidosis

c-Syphilis

d-Asthma

Answer: b

13-TNF is a:

a-Cytokine

b-Chemokine

c-Lipid

d-Complement protein

Answer: a

14-Which of the following cells and molecules are involved in asthma?

a-IgE and eosinophils

b-Cytokines

c-Macrophages and neutrophils

d-Complement proteins

Answer: a

15-Which of the following is true regarding chemokines?

a-C3A is an example

b-Factor H is an inhibitor for them

c-They are involved in opsonization

d-They have G-protein coupled receptors

Answer: d

16-Stasis and Erythema are caused by:

a-Leukocytes

b-Expression of selectins

c-PMN accumulation

d-Histamine as a vasodilator

Answer: d

17- A patient is present with a red and swollen appendix and had to undergo appendectomy. No considerable number of lymphocytes is found. Which of the following is correct?

a-It is a chronic appendicitis

b-Transudate fluid is found

c-It is a purulent suppurative inflammation

d-None of the above is correct

Answer: c

18-Which of the following are pain mediators?

a-Chemokines

b-Prostaglandins and bradykinin

c-Histamine

d-Platelet-activating factor

Answer: b

19-Weak adhesion to the endothelium is mediated by:

a-LFA-1

b-Integrins

c-P and E selectins

d-PECAM-1

Answer: c

20- Which of the following is true regarding Nitric Oxide?

a-Acts as a vasoconstrictor

b-Produced without the need of enzymes

- c-A soluble gas derived from arginine
- d-Its concentration is always constant

Answer: d

21- Acute phase proteins are best described as:

- a-Their levels are used to diagnose prolonged chronic inflammation
- b-C-reactive protein is the only example
- c-Specific indicators of certain diseases
- d-Non-specific indicator of acute inflammation

Answer: d

22- What causes effusion of fluids in the first stages of vascular phase?

- a-Endothelial injury
- b-Leukocytes recruitment
- c-Retraction of endothelium via mediators
- d-Margination

Answer: c

23-Caseous necrosis is most likely found in:

- a-Peritoneal cavity
- b-Tuberculosis
- c-Myocardial infarction
- d-Pancreatic tissue

Answer: b

24-In the cellular phase of inflammatory response, the later strong adhesion of leukocytes to endothelium is mediated by:

- a- Integrin (ICAM-1)
- b- CD31 (PECAM-1)
- c- P and E Selectins
- d- Interleukins and Tumor necrosis factor (ILs and TNF)

Answer: a

25-The strong anti-inflammatory action of steroids is mediated by:

- a- Stimulation of histamine production
- b- Stimulation of lipoxygenase enzyme

- c- Inhibition of cyclooxygenase-1 (Cox-1)
- d- Inhibition of phagocytosis
- e- Inhibition of phospholipase leading to decreased production of leukotrienes and prostaglandins

Answer: e

26-A tissue biopsy from the colon for one of your patients who suffered from diarrhea was taken. The pathologist calls you and is worried about a parasitic infestation. The most likely inflammatory cellular infiltrate that he observed would be:

- a- Lymphocytes
- b- Plasma cells
- c- Eosinophils
- d- Macrophages
- e- Eosinophils, fibroblasts, and tissue macrophages.

Answer: c

27-The process of coating microbes to enhance their phagocytosis is defined as:

- a- Apoptosis
- b- Opsonization
- c- Diapedesis
- d- Effective phagocytosis
- e- Transmigration

Answer: b

28-A child was brought to the emergency room with sore throat. The Tonsils are red and congested, and he was febrile (Temp: 39.8 °c). Which mediator(s) is/are responsible for these 3 inflammatory features?

- a- Prostaglandins
- b- Interleukins
- c- Leukotrienes.
- d- Bradykinin
- e- Complement system proteins

Answer: b

29-Which one of the following mediators is implicated in the pathogenesis ischemic heart disease and brain strokes?

- a- Prostaglandin C4
- b- Leukotriene B4
- c- Leukotriene E4
- d- Prostaglandin E4
- e- Thromboxane A2.

Answer: e

30-Which one of the following serum markers that we usually measure to indicate the presence of non-specific inflammatory reaction?

- a- Liver transaminases
- b- Anti-nuclear antibodies
- c- C-reactive protein
- d- Prostaglandins C, D and E
- e- Tumor necrosis factor

Answer: c

31-Which of the following statements best describes the "inflammatory response"?

- a- In normal humans it is protective
- b- Always associated with systemic effects
- c- Transforms to chronic inflammation in 50% of the cases
- d- Events sequence is haphazard in 20% of the cases
- e- Its mediators are the same in amount

Answer: a

32-This is a cartoon image representing an important inflammatory cell. Which of the following statements best describes this cell feature or function?

- a- It contains high level of nitric oxide
- b- This cell secretes neutrophil extracellular traps (NET)
- c- The life span is 5-6 days
- d- This cell is a major producer of cytokines mediators
- e- It is a major chronic inflammatory cell infiltrate



Answer: b

33-Which of the following mediators is a cytokine produced by macrophages?

- a- Bradykinin
- b- Prostaglandin E
- c- Histamine
- d- Tumor necrosis factor (TNF)
- e- Thromboxane A2

Answer: d

34-A 49-year-old male patient came with recent non-intentional weight loss, fever and lymphadenopathy. A lymph node biopsy showed multiple necrotizing granulomas. The top differential diagnosis should be

- a- Sarcoidosis
- b- Non-specific chronic inflammation
- c- Viral lymphadenitis
- d- Tuberculous lymphadenitis
- e- Autoimmune necrotizing lymphadenitis

Answer: d

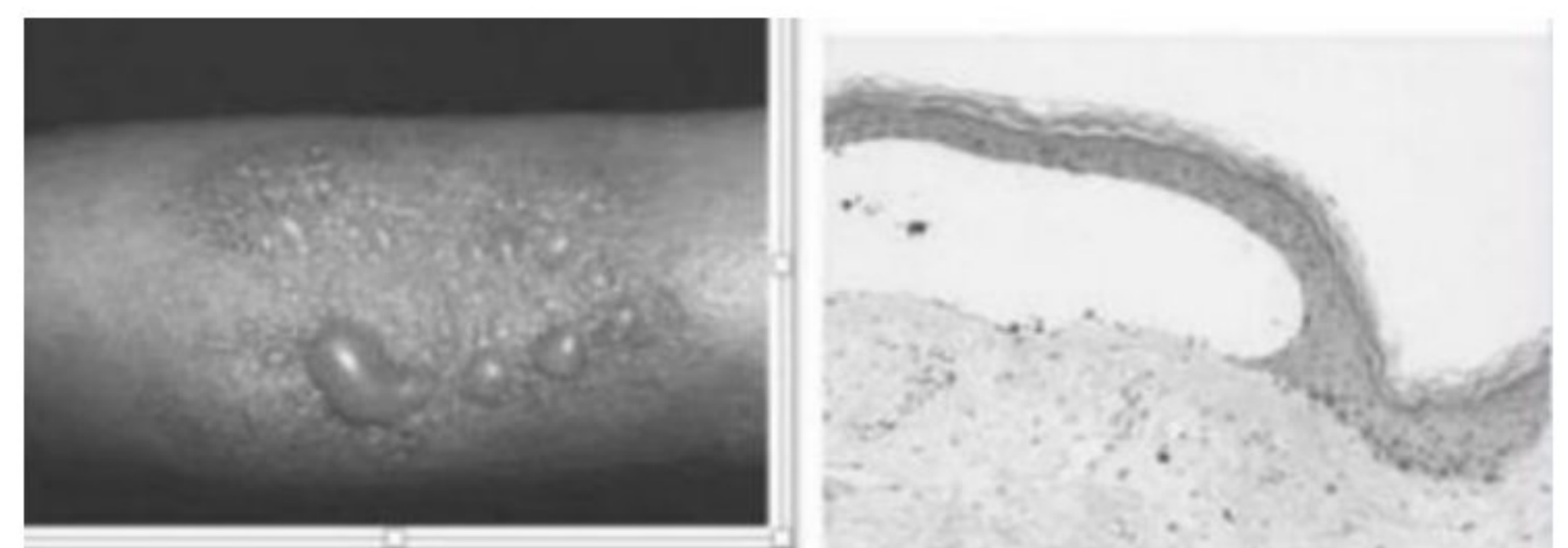
35-A 23-year-old female patient with chronic history of bronchial asthma who underwent removal of polyps from nose. The tissue examination revealed benign polyp with numerous numbers of eosinophils (hundreds). The pathologic explanation for this finding is?

- a- Allergic reaction/polyp
- b- Acute parasitic inflammation
- c- Chronic fibrinous inflammation
- d- Eosinophilic granulomatous inflammation
- e- Acute suppurative inflammation

Answer: a

36-Below is a picture of a hand (left) and its pathologic microscopic image. The best description of this type of reaction is?

- a- Ulcerative inflammation
- b- Fibrinous inflammation
- c- Suppurative inflammation
- d- Serous inflammation

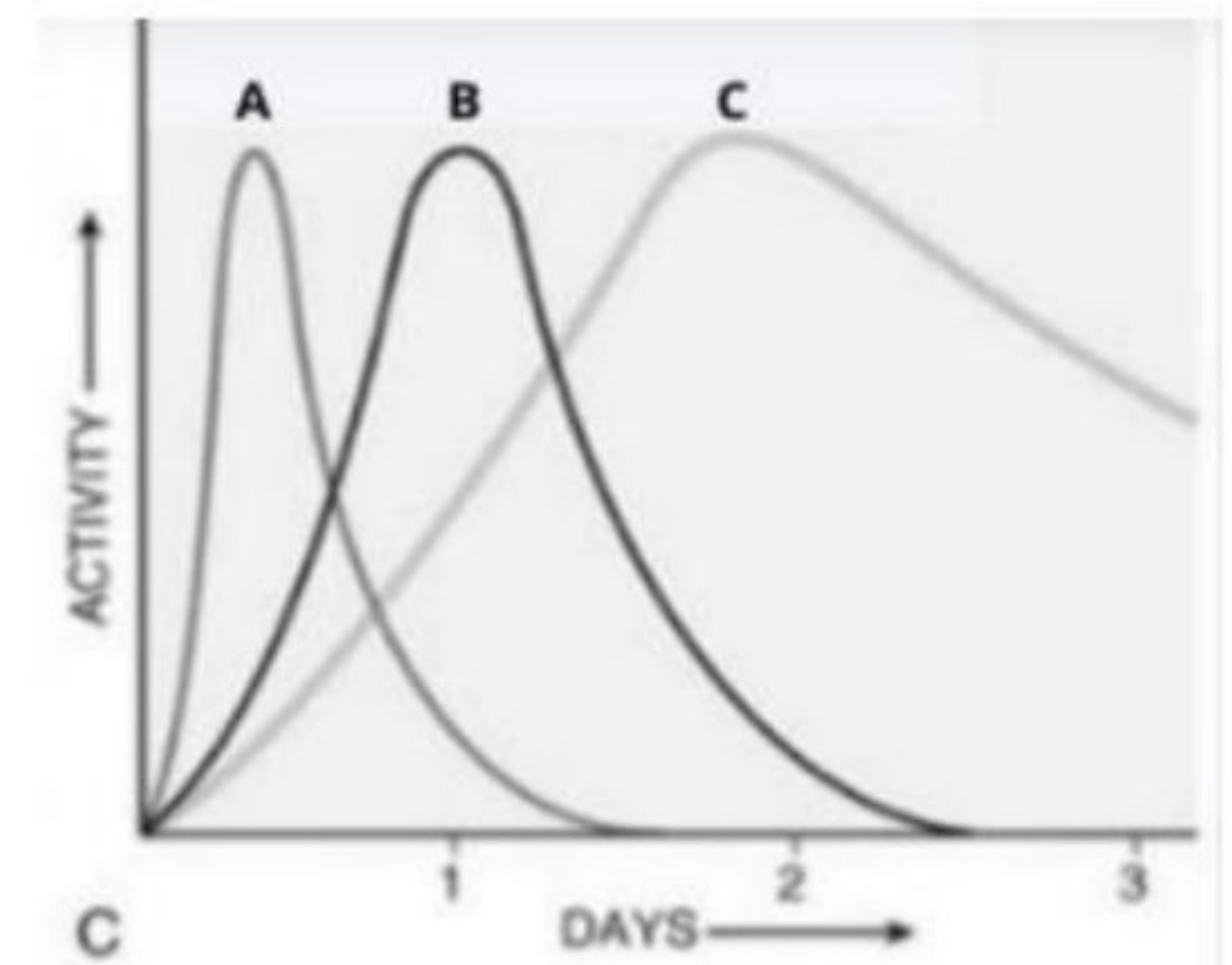


e- Exudative inflammation

Answer: d

37-Which one of the following statements is correct?

- a- Curve A represents the macrophages and lymphocytes cellular infiltration phase
- b- Curve B represents the initial neutrophilic infiltration phase
- c- Curve A represents the initial cellular phase
- d- Curve C represents the initial edematous phase
- e- Curve B represents the initial vascular phase



Answer: b

38-Which one of the following best describes the vascular leakage in the early vascular phase of acute inflammation?

- a- It is an early phase due to retraction of endothelial cells
- b- It is due to increased intravascular oncotic pressure
- c- It is due to direct endothelial cell injury by adhering neutrophils
- d- The process is best called transcytosis induced by growth factors
- e- It is mediated by blockage of the lymphatic channels

Answer: a

39-Which receptors are responsible for recognizing pathogens proteins in the initial phases of inflammation?

- a. Receptors for lectins and collectins.
- b. Receptors for circulating complement system proteins.
- c. Toll-like receptors
- d. Receptors for immunoglobulins E (IgE).
- e. Receptors for damage associated molecular patterns (DAMPS)

Answer: c

40-The major function of the alternatively activated macrophage (M2) is?

- a. Inhibition of inflammation and activation of repair
- b. Bacterial recognition
- c. Nitric oxide production
- d. Activation and stimulation of viral intracellular killing

e. Opsonization and phagocytosis

Answer: a

41-After removal of the appendix for a patient; the pathology report came back with "acute appendicitis". What did the pathologist most likely see under microscopic examination?

- a- Atypical glands with abnormal mitosis
- b- Loss of appendicular architecture and granulomas
- c- Numerous eosinophils
- d- Fibrosis and numerous lymphocytes
- e- Numerous tissue neutrophils

Answer: e

42-Which one of the following histopathological findings would be most consistent with Sarcoidosis?

- a- Serous transudative inflammation
- b- Non-necrotizing granulomatous inflammation
- c- Suppurative exudative inflammation
- d- Ulcerative inflammation
- e- Necrotizing granulomatous inflammation

Answer: b

43-Which of the following arachidonic acid metabolites is a strong chemotactic agent?

- a- Leukotriene E4
- b- Leukotriene B4
- c- Leukotriene C4
- d- Prostacyclin
- e- Prostaglandin G2

Answer: b

44-The pathologist calls you to let you know that your patient tissue biopsy revealed the presence of "necrotizing granulomatous inflammation". What would be the most important question to ask the pathologist?

- a- Was there any atypical mitosis?
- b- Were there asteroid bodies in the granulomas?
- c- Were the granulomas large or small?

d- Was there an increase in the number of plasma cells?

e- Did you do acid-fast stain (tuberculosis stain)?

Answer: e

45- Which of the following is a product of lipoxygenase enzyme?

a- Prostacyclin

b- Histamine

c- Leukotriene C4

d- IL-6

Answer: c

46- One of the following factors induces notch signalling and sprouting:

a- VEGF

b- TGF- β

c- TNF

d- IL-1

e- IL-2

Answer: a

47- What is true about TGF- β ?

a- an important fibrogenic factor

b- responsible for sprouting

c- has no role in repairing

d- produced by neutrophils only

e- has no importance in tumors

Answer: a

48- Which of the following is found in mature scars?

A. Granulation tissue

B. cross linked collagen 1

C. a lot of thin-walled capillaries

D. collagen 3 only

E. collagen 2 only

Answer: b

49- A 70 year old man with emphysema, his weight is 150 kg, will undergo abdominal surgery for a large small bowel mass, the best description for the case:

- a- there's no risk
- b- complicated surgery with high risks that needs hospitalization
- c- very easy surgery, Assure him
- d- there might be some risk, not too complicated
- e- very high risk, and he might die, advise him not to do it

Answer: b

50- Which of the following mediates fibrogenesis and ECM deposition?

- a- TNF
- b- IF- γ
- c- TGF beta
- d- Nitric oxide

Answer: c

51- mediator of the initial inflammatory response:

- a- Selectins
- b- TLR
- c- IL-10
- d- Collagen

Answer: b

52- The following picture represents:

- a- keloid scar
- b- Arterial ulcer
- c- Hypertrophic scar
- d- Diabetic ulcer



Answer: a

53- Which of the following is true about bed ulcers?

- a- They are always fatal
- b- They are impossible to deal with
- c- They are preventable
- d- They appear as an intact epithelial surface under the microscope

Answer: c

54- One of the following is considered a feature of acute inflammation:

- a- It is mediated by lymphocytes
- b- It has a slow onset
- c- It has prominent signs
- d- It is always severe and progressive
- e- It has no signs and symptoms

Answer: c

55- Which one of the following is considered a stable tissue?

- a- skeletal muscle
- b- liver
- c- skin
- d- cardiac muscle
- e- bone marrow

Answer: b

56- Secondary repair -compared with initial repair- has:

- a- more scar and more tissue injury
- b- always associated with tissue granuloma
- c- very small tissue lost
- d- maintained function of the repaired tissue

Answer: a

57- One of the following sentences is correct:

- a- Tissues with better blood supply heal more slowly
- b- Healing process is affected by one factor only
- c- Taking steroid drugs will delay tissue repair
- d- The presence of foreign bodies enhances repair process

Answer: c

58-This image represents:

- a- Deep ulcer with atherosclerosis
- b- nonhealing gangrene with fungal infection
- c- Wound dehiscence
- d- Inflamed leg with dilated blood vessels



Answer: a

59-M2 macrophages are responsible for which of the following?

- a- inhibition of inflammation
- b- promoting repair
- c- secreting IL-10
- d-All of the above

Answer: d

60-A patient suffers from a tender polyp in teeth with yellow liquid, the most accurate sentence is:

- a- can be treated with antibiotics since it's a bacterial infection
- b- inflammation with abscess
- c- A defect of the mucosal surface
- d- Involves transudate fluid

Answer: b

61-A patient with rheumatoid arthritis has been on steroids for a long time. He is suffering from shortness of breath and fever. X rays shows a bilateral lung infiltration, diagnosis of the case is:

- a- opportunistic lung infection
- b- Staphylococcal pneumonia
- c- Asthma
- d- squamous cell carcinoma

Answer: a

62-Which of the following statements best describes repair in the gastrointestinal mucosa?

- a- Mediators are released and tissue is replaced by immature scar formation
- b- stem cells are recruited every week to differentiate and grow
- c- mucosa is a permanent tissue incapable of regeneration

- d- granulation tissue will be stimulated to mature to collagen type 1
- e- regeneration is quick and continuously active to replace lost tissue

Answer: e

63-Which of the following is not a characteristic of exudative edema?

- a- High protein content
- b- High cell count
- c- Low specific gravity
- d- Full of cell debris

Answer: c

64-Which one of the following mediators is a strong fibrogenic and scar forming factor?

- a- prostaglandin E4
- b- histamine
- c- transforming growth factor beta
- d- interleukin 17
- e- complement system protein 5A

Answer: c

65-Which one of the following factors will significantly delay healing of a surgical wound?

- a- ingestion of oral antibiotics as prophylaxis
- b- a patient with severe atherosclerosis
- c- taking oral pain killers for pain control
- d- early post-operative immobilization
- e- a patient with prior cholecystectomy

Answer: b

66-You are examining a 65 year old male patient with fever, malaise and shortness of breath. History denotes severe rheumatoid arthritis requiring long term high dose steroid treatment chest. X-Ray shows bilateral lung infiltrates. What should you consider in this particular patient as an important differential diagnosis?

- a- opportunistic lung infection
- b- lung Abscess due to necrotizing inflammation
- c- community acquired candida pneumonia
- d- lobar pneumonia due to Haemophilus influenza infection

e- H1-N1 influenza infection

Answer: a

67-A 53 year old male patient came to you with perianal pain, fever, and chills. He gave a history of anal fissures and hemorrhoids for the previous 2 years. On examination, you find a perianal swelling, ill-defined mass, which is tender to touch. you made the diagnosis of an abscess and you performed "incision and drainage". the wound after this procedure will heal by:

a- Healing by primary /first intention

b- This is a severe purulent inflammation /Abscess needing healing by granulation tissue (secondary intention)

c- Quick regeneration and re-epithelialization

d- Platelet plug scab

e- stem cells will be required and regeneration of lost tissue will follow

Answer: b

68-The major function of vascular endothelial growth factor VEGF in the early phase of repair is :

a- fibroblast recruitment and proliferation

b- angiogenesis, sprouting and not signaling

c- platelet aggregation

d- fibroblast activation

e- basement membrane degradation

Answer: b

69-In which of the following scenarios the risk for post-operative wound dehiscence would be high?

a- transabdominal open colon cancer resection in 65-year-old male patient who is obese and a chronic smoker

b- we don't see this complication anymore with modern medicine

c- tooth root canal surgery for a 75-year-old obese male patient

d- valvular heart replacement surgery requiring open thoracotomy in a 59-year-old female patient who is a heavy chronic smoker

e- laparoscopic cholecystectomy for a 63-year-old male patient with morbid obesity and chronic smoking history

Answer: a

70-Activation Of fibroblast and deposition of matrix and repair is mainly mediated by?

- a- vascular endothelial growth factor
- b- prostaglandin E4
- c- transforming growth factor beta
- d- leukotriene B4
- e- interleukin 17

Answer: c

71-Microscopic examination of granulation tissue and early immature scar formation will show:

- a- numerous young capillaries and heavy mixed inflammation cell infiltrate
- b- complete re-epithelialization of the surface
- c- heavy eosinophilic and mast cell infiltrate
- d- Abundant cross-linked collagen type 1 fibers
- e- numerous foreign-body type giant cells granulomas

Answer: a

72-Bed "pressure" sores are best described as:

- a- Diabetic foot ulceration with super-added infection
- b- Serous-type inflammation with complicating infection
- c- avoidable ulcer due to bad nursing/home care
- d- stress ulcer from severe chronic diseases
- e- mild superficial ulcers that are easy to heal

Answer: c

73-In contrast to repair after acute inflammation, repair after chronic inflammation is characterized by:

- a- Lesser activity of vascular endothelial growth factor
- b- Lesser amount of collagen type 1
- c- more granulation tissue and scar formation
- d- quick and simple with no need for mediators
- e- better repair process with no sequel sequelae

Answer: c

74-The final stages of repair remodelling are characterized by:

- a- formation of platelet plugs
- b- increased angiogenesis
- c- degradation of collagen by matrix metalloproteinase
- d- oxidative burst by inflammatory cells
- e- switching type 1 collagen to type 3

Answer: c

75-This finding is best described as:

- a- Abnormal excessive repair and the scar formation
- b- A side effect of using certain type of surgical sutures
- c- occurs in patients with a pre-existing atherosclerosis
- d- Wound dehiscence



Answer: a

76-Which of the following is related to this finding:

- a- Severe ischemia due to atherosclerosis
- b- Friction burn of skin and subcutaneous tissue
- c- radiation injury for squamous cell carcinoma of the leg
- d- traumatic serous inflammation of the skin and subcutaneous tissue
- e- varicose veins of lower limbs



Answer: a

77-After cutting your hand with a knife, the wound gets smaller spontaneously, which of the following mechanisms contributed to this resolution?

- a- Dilation of blood vessels
- b- Contraction of myofibroblasts
- c- Release of prostaglandins
- d- M1 macrophages

Answer: b

78-Which of the following is an anti-inflammatory mediator?

- a- IL-1
- b- IL-17
- c- TNF
- d- IL-10

Answer: d

79-Which of the following is a result of the lipoxygenase pathway?

- a- Leukotriene C4
- b- PGE2
- c- Histamine
- d- Prostacyclin

Answer: a

80-Which of the following is wrong about neutrophils?

- a- They are never seen in chronic inflammation
- b- Their half-life is 1-2 days
- c- They have phagocytic abilities
- d- They have multi-lobed nuclei

Answer: a

81-All of the following have minimal replicative activity in their normal state except:

- a- liver
- b- pancreas
- c- skin
- d- kidney

Answer: c

82-Which of the following is involved in the recruitment of smooth muscle cells in angiogenesis?

- a-TNF
- b-PDGF
- c-TGF- β
- d-All of the above

Answer: b

83-Actions of MMPs are inhibited by:

- a- TIMP
- b- VEGF
- c- Proteases
- d- lead cells

Answer: a

84-One of the following is seen in healing with first intention:

- a- Large amount of scar tissue
- b- Functional disability
- c- Minimal wound contracture
- d- all of the above

Answer: c

85- What type of inflammation is seen in blisters?

- a- Purulent inflammation
- b- Serous inflammation
- c- Ulcerative inflammation
- d- Fibrinoid inflammation

Answer: b

86-Which of the following is a common mediator in all complement pathways?

- a- Lectins
- b- IgG Antibodies
- c- Mannose
- d- C3

Answer: d

87-The first changes in vascular phase include:

- a- Transient vasoconstriction then vasodilation
- b- Margination of WBCs
- c- Chemotaxis of cells towards side of inflammation
- d- None of the above

Answer: a

88-A patient comes with fever and right lower quadrant tenderness. Acute appendicitis is suspected. Which of the following is seen in his blood workup?

- a- Neutrophils
- b- lymphocytes
- c- eosinophils
- d- mast cells

Answer: a

89-The correct sequence of steps in inflammation:

- a-Recruitment, recognition, controlling, removal, repair
- b-Recognition, recruitment, removal, regulation, repair
- c-Removal, regulation, repair, recognition, recruitment
- d-Recruitment, repair, removal, recognition, controlling

Answer: b

90-Mediators that are secreted by alternatively activated (M2) macrophages:

- a- IL-12
- b- TNF, IL-1 and IL-6
- c- IL-4 and IL-5
- d- growth factors and IL-10

Answer: d

91-Steroids work through:

- a- Increasing prostaglandins
- b- Inhibition of phospholipases
- c- Inhibition of lipoxygenases
- d- More than one of the above

Answer: b

92-Which of the following is seen in exudative fluids:

- a- low proteins
- b- low specific gravity
- c- high cellularity
- d- serous fluid

Answer: c

93-Which of the following is correct regarding granulomas?

- a- They are full of epithelial cells
- b- They indicate acute inflammation
- c- Sarcoidosis is diagnosed by exclusion
- d- If granuloma is caseating, don't think about TB

Answer: c

94-Induction of pain is mainly through:

- a- Cytokines
- b- Platelet activating factors
- c- Leukotrienes
- d- Kinins

Answer: d

95-The life span of neutrophils is:

- a- 1-2 days
- b- 5-7 days
- c- weeks to months
- d- Few hours

Answer: a

96-NETs are best described as:

- a- Collections of granules containing hydrolysing enzymes
- b- Viscous meshwork of nuclear chromatin
- c- Produced after death of monocytes
- d- Implicated in pathogenesis of asthma

Answer: b

97-TNF is mainly produced by:

- a- Endothelial cells
- b- Eosinophils
- c- macrophages and T-lymphocytes
- d- Mast cells

Answer: c

98-Which of the following is wrong regarding granulomas?

- a- They indicate chronic inflammation
- b- Causes can be infective or non-infective
- c- Epithelioid histiocytes are recruited by B cells
- d- None of the above is wrong

Answer: c

99-Which of the following is a wrong mismatch?

- a- macrophages/B cells interaction is bi-directional activation
- b- NETs and neutrophils
- c- IL-5 and eosinophils
- d- IgE and mast cells

Answer: a

100-All of the following are involved in fever except:

- a- TNF
- b- CRP
- c- IL-1
- d- PGE2

Answer: b

101- Which of the following is incorrect regarding liver?

- a- It is a labile tissue
- b- It has capacity for regeneration
- c- It is a stable tissue
- d- It can be affected by organ fibrosis

Answer: a

102-Which of the following induce recruitment of neutrophils and macrophages in both chronic and acute inflammation?

- a- IL-10
- b- IL-12
- c- IL-17
- d- IL-6

Answer: c

103-Which of the following cells live in the tissue for years?

- a- Neutrophils
- b- macrophages
- c- Eosinophils
- d- Basophils

Answer: b

104-All of the following are caused by activation of M2 macrophages by the alternative pathway except?

- a- Wound repair
- b- Fibrosis
- c- Anti-inflammatory effects
- d- Phagocytosis

Answer: d

105-Which of the following mediator is responsible for erythema and stasis from blood vessels?

- Histamine
- Kinins
- Leukotrienes
- Reactive oxygen species (ROS)

Answer: a

106-What is the best definition of the inflammatory response?

- a- always beneficial to the body
- b- progressive and prominent signs and symptoms
- c- response of vascularized tissue to injury
- d- resolution of damage through fibrogenic factors

Answer: c

107-Which of the following is correct regarding mediators of inflammation?

- a- They work independently from each other
- b- All mediators are proteins
- c- They are hard to control and suppress
- d- They can activate each other

Answer: d

108-Which of the following cells is seen in acute allergic reactions?

- a- Macrophages
- b- Eosinophils
- c- Neutrophils
- d- B lymphocytes

Answer: b

109-Which of the following diseases is characterized by one or more deficiencies of complement system?

- a- PNH
- b- Hereditary angioedema
- c- Hemolytic uremic syndrome
- d- Myocardial infarction

110-The correct order of leukocyte migration is:

- a- Margination-rolling-adhesion-transmigration
- b- Rolling-margination-adhesion-transmigration
- c- Transmigration-adhesion-margination-rolling
- d- Rolling-adhesion-transmigration-margination

Answer: a

111-Which part of complement system works as an opsonin?

- a-C3a
- b-C5a
- c-C3b
- d-C9

Answer: c

112-What enzyme does aspirin inhibit?

- a- lipoxygenase
- b- cyclooxygenase
- c- phospholipase A
- d- phospholipase C

Answer: b

113-Pus is best described as:

- b- found always inside an abscess
- c- caused by imbalances in oncotic pressures
- a- purulent exudate
- d- caused by viral infections

Answer: c

114-What is the mechanism of transudative effusion in congestive heart failure?

- a- Increased hydrostatic pressure
- b- Decreased oncotic pressure
- c- Retraction of endothelial cells
- d- Transmigration of WBCs

Answer: a

115-Acute asthma is characterized by the presence of:

- a- IgA antibodies
- b- IgE antibodies
- c- IgG antibodies
- d- None of the above

Answer: b

116-one of the following cells has a phagocytic ability:

- a- Eosinophils
- b- T lymphocytes
- c- Mast cells
- d- Neutrophils

Answer: d

117-The main mediator in fever is:

- a- Thromboxane A2
- b- Prostaglandin E2
- c- NO
- d- Leukotriene E4

Answer: b

118-Which of the following is true regarding a patient with gout disease?

- a- Granuloma is formed
- b- Toll-like receptors recognize PAMPs
- c- Cell damage sensors recognize uric acid crystals as DAMPs
- d- No inflammation is seen in this patient

Answer: c

119-Which complement protein works as a chemoattractant?

- a- C4
- b- C3b
- c- MAC
- d- C5a

Answer: d

120- Receptors that recognize damaged DNA out of cells are:

- a- Cell damage sensors
- b- Toll-like receptors
- c- Complement system
- d- G-protein coupled receptor

Answer: a

121-Which of the following is wrong regarding complement system?

- a- It has multiple pathways of activation
- b- Complement proteins are found intracellularly inside lysosomes
- c- Complement proteins have different functions
- d- Complement proteins can be found without inflammation

Answer: b

122- Complement proteins that are related to histamine include:

- a- C3a
- b- C5a
- c- C3b
- d- a+b

Answer: d

123- Which of the following is a wrong statement?

Epithelium is a stable tissue

124- Healing by first intention is characterized by:

Minimal wound contraction

125- Which of the following is not an angiogenesis inhibitor:

PDGF

126- A molecule associated with transmigration:

PECAM-1

127- A molecule associated with vasodilation:

NO

128- Which of the following causes synthesis of acute-phase proteins?

IL-6

129- Which of the following is a mismatch:

TH1 and IL-2