# GENESIS

(Post Graduation Medical Orientation Centre)

Friday Mega Batch 2

**Total Number- 100** | **Subject: Inflammation** | **Time : 40 Min**

**Pass Mark : 70** | Question 31-50 is based on Single answers | **Date : 07/02/20**

**1. Activated Macrophages release:**
a) Nitrous oxide
b) Acid hydrolase
c) TGF-β
d) TNF-α
e) Plasminogen activator
**FTTFT**

**2. Histamine is stores in**
a) White blood cell
b) Basophil
c) Cells in the gastric mucosa
d) Platelet
e) Neurons in the CNS
**FTFTF**

**3. Transient vasoconstriction is caused by**
a) Histamine
b) $TXA_1$
c) $LT\text{-}B_4$
d) $LT\text{-}C_4$
e) $LT\text{-}D_4$
**FTFTT**

**4. $O_2$ independent killing mechanisms in neutrophil**
a) MPO-Halide
b) Lactoferin
c) Reactive Nirogen intermediate
d) Cationic proteins
e) Lysoenzyme
**FTFTT**

**5. Major opsonins include-**
a) C5a
b) $C_3b$
c) Fab portion of IgG
d) MBL
e) Fibronectin
**FTFTT**

**6. Acute phase Reactants**
a) Include CRP, SAA fibrinogen
b) Increase in concentration during inflammation
c) Are mostly produced in thymus
d) Are increased during pregnancy and old age
e) Can act as opsonins
**TTFFT**

**7. Following substances causes chemotaxis**
a) Leukotriene D4
b) C3a, C5a
c) Bacterial products (N-formyl methionine terminal amino acid)
d) IL-8
e) IgG
**F ( LT-B4) T T T F**

**8. The main components of the pyogenic membrane are:**
a) Eosinophils
b) Capillary loops
c) Hyaluronidase
d) Polymorphonuclear leucocytes
e) Fibroblasts
**F T F T T**

**9. Prostaglandins are**
a) Formed from complement
b) Vasodilators
c) Involved in clotting
d) Inhibited by azathioprine
e) Inhibited by aspirine
**FTTFT**

**10. Phagocytosis is promoted by:**
a) Hyaluronidase
b) Neuraminidase
c) The hexose monophosphate shunt
d) Immunoglobulin
e) Complement
**F F F T T**

**11. Functions of platelet-derived growth factor (PDGF) include**
a) Stimulation of platelet aggregation
b) Inhibition of platelet aggregation
c) Stimulation of angiogenesis
d) Chemotaxis for macrophages
e) Prevention of wound contraction
**FFTTF**

**12. C-reactive protein (CRP)**
a) Measurement is an indirect index of acute inflammation
b) Is a late indicator of acute inflammation
c) Is synthesized in the liver
d) Synthesis is upregulated by TNF
e) Concentration in plasma increase several hundred fold in acute inflammation
**FFTFT**

**13. Regarding endothelial cell contraction in acute inflammation**
a)Occurred in veins venules
b) It is most common & reversible phenomenon
c) Histamine is one of responsible factor
d) Troponin is responsible for contraction
e) TNF is also responsible mediator
**F(only venules)TTF(myosin)F(retraction facto)**

**14. Beneficial effects of exudate**
a) Nourish cell
b) High pH inhibit Bacterial growth
c) Excessive fibrin which is helpful
d) Inhibit proteolytic enzyme
e) Stimulate immune response
**TF(low pH)F(Harmful effect)TT**

**15.Transudate differed from exudate**
a) Specific gravity is higher than exudate
b) Protein distribution as present in plasma
c) Total protein count less than 1gm/dl
d) Has tendency to clot
e) Few cells may present where all are mesothelial
**FF(mostly albumin)TF(has no fibrinogen)T**

**16. E-selectin endothelial molecule has major role in**
a) Eosinophil
b) T lymphocyte
c) Neutrophil
d) Monocytes
e) B-lymphocyte
**FTTTF**

**17. Eosinophilic chemotactic agents are**
a) C5q
b) IL-I
c) P4D2
d) IL-5
e) TNF
**TFTTF**

**18 .Hemorrhagic inflammation found in**
a) Meningococcal septicemia
b) Plague septicemia
c) Acute influenza
d) Rickettsiadisease
e) Herpes encephalitis
**TTTTF**

**19. Following mediators released from mast cell**
a) Histamine
b) Serotonin
c) PAF
d) ROS
e) IL-I
**TFTFT**

**20. Following mediators causing both vasoconstriction and increased vascular permeability**
a) PAF
b) TXA2
c) Substance P
d) Lt D4
e) C3a & C5a
**TFFTF**

**21. Platelet activating factors actions are**
a) Vasoconstriction
b) Vasodilation
c) Oxidation burst
d) Chemotaxis
e) Stimulation of other mediators
**TTTTT(low conc→ vasodilation)**

**22. Regarding Nitric oxide-**
a) May synthesized from neurons
b) Enzyme nitric oxide reductase needed
c) There are 4 subtypes
d) It reduces platelet aggregation
e) Abnormal production occurred in DM
**TF(No syntheses)F(3) TT(Also HTN, atheroscleron)**

**23.Granuloma comprised of**
a) Frequently epithelioid cell
b) Occasionally giant cell
c) Frequently plasma cell
d) Principally lymphocytes
e) Necrosis may not present
**TF(frequently)F(occasionally)TT**

**24. Noncaseating granuloma found in**
a) Soft tubercle of TB
b) Lepromatous leprosy
c) toxoplasmosis
d) Ulcerative colitis
e) Brucellosis
**FFFFF(all epithelioid cell granuloma)**

**25. Regarding Leukocyte recruitment to sites of inflammation**
a) E-Selectin expressed on endothelium
b) L-selectin expressed on lymphocyte
c) P-selectin expressed on plasma protein
d) Loose attachment of leukocyte mediated by integrins
e) Firm attachment of leukocyte mediated by selectins
**TF(Leukocyte) F(platelets) F(selectins) F (integrins) (R 75-78)**

**26. Causes of acute inflammation include**
a) Ischaemic injury
b) Autoimmunity
c) Graft vs host disease
d) Foreign body response
e) Pancreatitis resulting in psedocyst formation
**T TTT(Mesh in hernia repair) F(chronic)**

**27. Termination of acute inflammation occurs due to**
a) Lipoxins
b) TNF
c) TGF-β
d) IL-10
e) IL-12
**TFTTF**

**28. Malignant Giant cell includes:**
a) Tuoton giant cell
b) Reed –steinberg giant cell
c) Aschoff giant cell
d) Giant cell in choriocarcinoma
e) Giant cell in herpes simplex
**FTFTF**

**29. The following belong to the mononuclear phagocyte system:**
a) Macrophages
b) Mast cells
c) Epithelioid cells
d) Fibroblast
e) Kupffer cells
**T F T F T**

**30. Granulomatous inflammation**
a) Is a type III hypersensitivity response
b) Shows dominant infiltration of tissue by plasma cells
c) Contains epithelioid cells derived from tissue histiocytes
d) Occurs in sarcoidosis
e) Occurs in visceral leishmaniasis
**FFTTF**

**Each question below contains five suggested answers- choose the <u>one best</u> response to each question (31-50)**

**31. In an experiment, streptococcus pneumonlae organisms are added to a solution containing leukocytes. Engulfment and phagocytosis of the microbges is observed to occur. A substance is then added that enhances engulfment. Which of the following substancws is most likely to produce this effect ?**
a) Glutathione peroxidase
b) Complement C3b
c) Immunoglobulin M
d) P-selectin
e) NADPH oxidase
**B**

**32. Which of the following types of inflammation is most likely to be characterised by Langhans giant cells?**
a) Fibrinous inflammation
b) Granulomatous inflammation
c) Purulent inflammation
d) Serous inflammation
e) Suppurative inflammation
**B**

**33. A macrophage is a type of cell with diverse functions and plays a significant role in adaptive immunity, wound healing and muscle regeneration. Which one of the following statements is correct of macrophages?**
a) They are derived from blood lymphocytes
b) They are capable of phagocytosis
c) They have a shorter survival than neutrophils outside the circulation
d) They produce immunoglobulins
e) They do not multiply
**B**

**34. Phagocytes are cells that are involved in the immune response by ingesting harmful foreign bodies.**
**Which of the following is an example of a phagocyte?**
a) B lymphocyte
b) Mast cells
c) Megakaryocytes
d) Neutrophil polymorphs
e) T lymphocytes
**D**

**35. What is the function of ICAM-1 and VCAM-1 in inflammation?**
a) Chemotaxis
b) Leukocyte adhesion
c) Leukocyte margination
d) Leukocyte transmigration
e) Phagocytosis
**B**

**36. A 16-year-old boy with a 1-day history of sore throat was seen by his GP. On physical examination, the most prominent finding was a pharyngeal purulent exudate. Which of the following types of inflammation does this boy have?**
a) Acute inflammation
b) Abscess formation
c) Chronic inflammation
d) Granulomatous inflammation
e) Resolution of inflammation
**A**

**37. The histopathology report for a granulomatous lesion suggests chronic inflammation. Which cell types are most commonly seen in tissue undergoing chronic inflammation?**
a) Eosinophils
b) Lymphocytes
c) Mast cells
d) Neutrophils
e) Platelets
**B**

**38. Arachidonic acid is one of the essential fatty acids required by most mammals. It is essential for the synthesis of which of the following mediators of inflammation?**
a) Bradykinin
b) Interferon-gamma
c) Interleukin-1
d) Prostaglandins
e) Tumour necrosis factor
**D**

**39. Vasodilatation first involved**
a) Venules
b) Capillaries
c) Post capillary venules
d) Arterioles
e) Meta arterioles
**D**

**40. Main source of histamine**
a) Mast cell
b) Basophil
c) Platelet
d) Leukocyte
e) Endothelial cell
**A**

**41. Major platelet eicosanoid**
a) Thromboxane A1
b) Thromboxane A2
c) Leukotriene B4
d) Leukotriene C4
e) Prostaglandin D2
**B**

**42. Complement mediators acts as major anaphylatoxin**
a) C3a
b) C5a
c) C3b
d) C4a
e) C9b
**B**

**43. Which one is the principal cell of granuloma**
a) Plasma cell
b) Epithelioid cell
c) Langshan's giant cell
d) Macrophage
e) Lymphocyte
**E**

**44. The presence of non-caseating granulomas and hypercalcaemia is most suggestive of?**
a) Histoplasmosis
b) Sarcoidosis
c) Tuberculosis
d) Berylliosis
e) Eosinophilic granuloma
**B**

**45. A 58-year-old farmer with a hydatid cyst in the liver was admitted for elective surgery to remove the cyst. Which of the following white blood cell types will be raised in this patient's preoperative full blood count?**
a) Basophils
b) Eosinophils
c) Lymphocytes
d) Monocytes
e) Neutrophils
**B**

**46. Which of the following cytokines has anti-inflammatory properties?**
a) Granulocyte macrophage colony-stimulating factor
b) Interleukin-2
c) Interleukin-3
d) Interleukin-10
e) Tumour necrosis factor (TNF)
**D**

**47. Which cytokine is responsible for insulin resistance?**
a) IL-1
b) IL-6
c) IL-12
d) IL-17
e) IFN-γ
**A**

**48. A 53-year-old woman has had a high fever and cough productive of yellowish sputum for the past 2 days. Her vital signs include temperature of 37.8°C, pulse of 83/min, respirations of 17/min, and blood pressure of 100/60 mm Hg. On auscultation of the chest, crackles are audible in both lung bases. A chest radiograph shows bilateral patchy pulmonary infiltrates and fluid in the right pleural cavity. Thoracentesis yields 500 mL of cloudy yellow fluid. Which of the following inflammatory cell types is most likely to be seen in greatly increased numbers in a sputum specimen?**
a) Macrophages
b) Neutrophils
c) Mast cells
d) Small lymphocytes
e) Langhans giant cells
**B**

**49. Granuloma are found in except**
a) Leprosy
b) Syphilis
c) Brucellosis
d) Rickettsia
e) Cryptococcosis
**D**

**50. In inflammation, Pain & Fever occurs due to action of**
a) TNF
b) IL-1
c) Bradykinin
d) Prostaglandins
e) Histamin
**D [Ref. Robbin's 9th p-90+ Khaleque p-36]**