

Pathology MSK Midterm Revision (Joints and Osteodystrophy)

1- Synovial membrane contains.....synoviocytes

- A) Type A (specialized macrophages)
- B) Type B (fibroblasts)
- C) Type C
- D) Type D
- E) Both A & B

2- Acute suppurative arthritis is caused by?

- A) Staph aureus
- B) Strept pyogenes
- C) Strept viridans
- D) Staph epidermidis
- E) Both A & B

3- Osteoarthritis (Degenerative arthritis) occurs in

- A) Children
- B) infant
- C) teenagers
- D) elderly

4- All of the following is true about Osteoarthritis (Degenerative arthritis) **except?**

- A) Occurs in elderly
- B) Joint affected is Hip joint in females
- C) Peak age: 60-80 years.
- D) Joints affected are Knees & hands in females

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|---|---|---|---|
| 1 | 2 | 3 | 4 |
| E | E | D | B |

5- Small bony projections that is formed at the joint periphery in Osteoarthritis (Degenerative arthritis) is called

- A) osteocytes
- B) osteoclast
- C) osteophytes
- D) osteoblast.

6- All of the following is true about Rheumatoid arthritis except?

- A) autoimmune disease
- B) Seropositive arthritis
- C) affect peripheral joints and other organs in the body.
- D) More in males.

7- All of the following is true about Rheumatoid arthritis except?

- A) Joints affected are Small joints of hands and feet.
- B) More in females.
- C) Production of anti-IgM antibodies.
- D) Peak age is 30-40 years

8- All of the following is true about Rheumatoid arthritis except?

- A) A synovial biopsy reveals Pannus.
- B) Increased osteoblastic activity.
- C) Organization of pannus leads to fibrous ankylosis.
- D) Erosion of the articular cartilage mainly at the periphery.

9-Local effects of Rheumatoid arthritis include:

- a. Stiffness.
- B. Swelling.
- c. Deformity.
- d. All of the above.

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|---|---|---|---|---|
| 5 | 6 | 7 | 8 | 9 |
| C | D | C | B | D |

10- Systemic effects of Rheumatoid arthritis include:

- a. +ve ANA in juvenile cases.
- B. Rheumatoid nodules.
- c. Vasculitis.
- d. RF is +ve in 85% of cases.
- E. All of the above.

11- All of the following is true about Gout except?

- A) Most first attacks are polyarticular.
- B) Metabolic arthritis.
- C) Tophi is diagnostic.
- D) Joints affected are first metatarsophalangeal joint of the big toe.

12- All of the following is true about Gout except?

- A) Caused by increased serum uric acid.
- B) More in Females.
- C) Usually appears after 20 to 30 years of hyperuricemia.
- D) Degradation of articular cartilage proteoglycans is the cause of mineralization.

13- All of the following is true about Ganglion cyst except?

- A) Joints affected are hand and wrist.
- B) More in females.
- C) May be after trauma.
- D) Peak age is Any age.
- E) All of the above

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|----|----|----|----|
| 10 | 11 | 12 | 13 |
| E | A | B | E |

Joint Diseases (VIP MCQs)

1. Synovial membrane contains Type **A** (specialized macrophages) & Type **B** synoviocytes (Similar to fibroblast).
2. Acute suppurative arthritis is caused by **Staph aureus & Strept pyogenes**.
3. Osteoarthritis (Degenerative arthritis) occurs in **elderly**.
4. Osteoarthritis (Degenerative arthritis):
 - Occurs in **elderly**
 - Peak age: **60-80** years.
 - Joint affected is **Hip** joint in **males**
 - Joints affected are **Knees & hands** in **females**
 - Small bony projections that is formed at the joint periphery in Osteoarthritis (Degenerative arthritis) is called **Osteophytes**.
5. Rheumatoid arthritis:
 - **autoimmune** disease
 - **Seropositive** arthritis
 - Affect **peripheral** joints and other organs in the body.
 - More in **Females**.
 - Joints affected are Small joints of hands and feet.
 - Production of anti-**IgG** antibodies.
 - Peak age is **30-40** years.
 - A synovial biopsy reveals **Pannus**.
 - Increased **osteoclastic** activity.
 - Organization of pannus leads to **fibrous ankylosis**.
 - Local effects of Rheumatoid arthritis include:
 - ✓ Stiffness.
 - ✓ Swelling.
 - ✓ Deformity.
 - Systemic effects of Rheumatoid arthritis include:
 - ✓ **+ve ANA** in juvenile cases.
 - ✓ Rheumatoid nodules.
 - ✓ Vasculitis.
 - ✓ RF is **+ve** in **85%** of cases.

Joint Diseases (VIP MCQs)

6. Gout:

- Most first attacks are **Mono**articular.
- **Metabolic** arthritis.
- **Tophi** is diagnostic.
- Joints affected are **first metatarsophalangeal joint of the big toe**.
- Caused by increased serum **uric acid**.
- More in **males**.
- Usually appears after 20 to 30 years of hyperuricemia.
- Degradation of articular cartilage **proteoglycans** is the cause of mineralization.

7. Ganglion cyst:

- Joints affected are **hand and wrist**.
- More in **females**.
- May be after **trauma**.
- Peak age is **Any age**.

14- Disturbance of bone growth is called

- a. Osteodystrophy.
- B. Osteoporosis.
- c. Osteopetrosis.
- d. Osteogenesis Imperfecta.

15- Hereditary Osteodystrophy include all of the following Except?

- a. Osteogenesis Imperfecta.
- B. Paget's disease.
- C. Osteopetrosis.
- D. Achondroplasia.

16- All of the following are true about Osteogenesis Imperfecta Except?

- a. It is a rare hereditary condition.
- B. Bone cortex is formed mainly of woven bone.
- c. Patient has Red sclera.
- d. Patient is short.

17- Clinically Osteogenesis Imperfecta include:

- A) Bone weakness.
- B) Patient has blue sclera.
- C) It may be associated with dentogenesis imperfecta.
- D) Hearing loss.
- E) All of the above

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| 14 | 15 | 16 | 17 |
| A | B | C | E |

18- All of the following are true about Osteopetrosis Except?

- a) It is a rare hereditary condition.
- b) Called Marble Bone Disease.
- c) Development of secondary anemia.
- d) Failure of the osteoclastic activity.
- E) The bone is hard and can't fracture easily.

19- Clinically Achondroplasia include all of the following Except?:

- a) resulted in abnormally Long stature.
- b) It is a disorder of bone growth.
- c) A common cause of disproportionate dwarfism.
- d) The head is large with prominence of the forehead, low nasal bridge.

20- Regarding Fibrous dysplasia:

- a) An acquired disturbance of bone growth.
- b) disorganized mixture of fibrous and osseous elements.
- c) Associated with Skin pigmentation & Acromegaly.
- d) It may be either polyostotic or monostotic.
- E) All of the above.

21- Regarding Paget's disease of Bone:

- A) An acquired disturbance of bone growth.
- B) characterized by bone resorption & new bone formation called Osteitis deformans
- C) Occurs after age of 40 years
- D) More in males.
- E) All of the above

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| 18 | 19 | 20 | 21 |
| E | A | E | E |

22- All of the following are true about Paget's disease of Bone Except?

- a) Include Hot Stage, Mixed stage and Cold stage.
- b) It may be polyostotic or monostotic
- c) More in Females.
- d) Sites are Skull, vertebrae and long bones.

23- All of the following are true about Paget's disease of Bone Except?

- a) May be complicated with low output heart failure.
- b) Causes lion face deformity of skull (leontiasis ossea)
- c) Causes Kyphosis
- d) Causes Forward bowing of legs
- e) The thickened bony trabeculae show mosaic appearance.

24- Complications of Paget's disease of Bone include:

- a) Fractures.
- b) High output heart failure.
- c) osteosarcoma
- d) Fibrosarcoma
- e) All of the above.

25- Rickets is a Defect in bone mineralization in.....

- a) Newborn babies.
- b) adults
- c) childhood.
- d) elderly

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| 22 | 23 | 24 | 25 |
| C | A | E | C |

26- All of the following are true about Rickets Except?

- A) It starts after 6 months.
- B) Patients have good functioning bone.
- C) Deficiency of vitamin D, C and phosphorous.
- D) The main source of vitamin D is sunlight (85%).
- E) Common in childhood.

27- Clinically Rickets include:

- A) Protrusion of the abdomen.
- B) Generalized lymphadenopathy and splenomegaly.
- C) Delayed standing, sitting and walking.
- D) Increased susceptibility to infections and anemia.
- E) All of the above.

28- Clinically Rickets include:

- A) Delayed closure of fontanelles and sutures
- B) Craniotabes
- C) Delayed dentition
- D) frontal bossing
- E) All of the above

29- Clinically Rickets include:

- A) Rosary chest
- B) Pigeon chest
- C) Harrison's sulcus
- D) Trefoil pelvis
- E) All of the above

| | | | |
|----|----|----|----|
| 26 | 27 | 28 | 29 |
| B | E | E | E |

30- Osteomalacia is a Defect in bone mineralization in.....

- a) Newborn babies.
- b) adults
- c) childhood.
- d) elderly

31- Clinically Osteomalacia include:

- A) Lumbar lordosis
- B) Bending of femur and tibia
- C) Contracted pelvis
- D) All of the above

32- Reduction of bone mass to a level below that required for normal bone support is called

- a. Osteodystrophy.
- B. Osteoporosis.
- c. Osteopetrosis.
- d. Osteogenesis Imperfecta.

33- Generalized Osteoporosis occurs in all of the following except?

- A) Paralyzed limb.
- B) Postmenopausal women and elderly men.
- C) Scurvy.
- D) Osteogenesis Imperfecta.
- E) Endocrinal.

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|----|----|----|----|
| 30 | 31 | 32 | 33 |
| B | D | B | A |

34- Exposure of the growth cartilage plate to radiation field leads to premature closure of.....

- A) Epiphysis
- B) metaphysis.
- C) diaphysis.

35- In renal osteodystrophy there is.....

- A) Hypercalcemia
- B) Hypocalcemia.
- C) Hyperkalemia.
- D) Hypokalemia.

36- Endocrinal osteodystrophy is due to:

- A) Steroids
- B) Hyperthyroidism.
- C) Hyperparathyroidism.
- D) Hyperkalemia.

37- Digital clubbing

- A) It affects mainly the fingers.
- B) Nails are elongated, curved, raise and cyanotic.
- C) Phalanges are thickened with subperiosteal new bone formation.
- D) Caused by Hypoxia.
- E) Caused by Acute lung diseases.

| | | | |
|-----------|-----------|-----------|-----------|
| 34 | 35 | 36 | 37 |
| A | B | D | E |

Osteodystrophy (VIP MCQs)

1. **Osteodystrophy** » It is disturbance of bone growth.
2. Hereditary Osteodystrophy
 - Osteogenesis Imperfecta.
 - Osteopetrosis.
 - Achondroplasia.
3. **Osteogenesis Imperfecta**
 - It is a **rare** hereditary condition.
 - Bone cortex is formed mainly of **woven** bone.
 - Patient is **short**.
 - Patient has **Blue** sclera.
 - Bone weakness. (**B**)
 - Patient has blue sclera. (**I**)
 - It may be associated with dentogenesis imperfecta. (**T**)
 - Hearing loss. (**E**).
4. **Osteopetrosis**
 - It is a **rare** hereditary condition.
 - Called **Marble Bone Disease**.
 - Development of **secondary anemia**.
 - Failure of the osteoclastic activity.
 - The bone is **Fragile** and can fracture **easily**.
5. **Achondroplasia**
 - It is a disorder of bone growth.
 - Resulted in abnormally **short** stature.
 - A common cause of **disproportionate dwarfism**.
 - The head is large with prominence of the forehead, low nasal bridge.
6. **Fibrous dysplasia**
 - An acquired disturbance of bone growth.
 - disorganized mixture of fibrous and osseous elements.
 - Associated with Skin pigmentation & Acromegaly.
 - It may be either polyostotic or monostotic.

Osteodystrophy (VIP MCQs)

7. Paget's disease of Bone:

- An **acquired** disturbance of bone growth.
- characterized by bone resorption & new bone formation called Osteitis deformans
- Occurs after age of **40** years
- More in **males**.
- Include **Hot Stage**, **Mixed stage** and **Cold stage**.
- It may be polyostotic or monostotic
- Sites are **Skull**, **vertebrae** and **long bones**.
- **Deformities:**
 - ✓ lion face deformity of skull (**leontiasis ossea**)
 - ✓ Kyphosis
 - ✓ Forward bowing of legs
- The thickened bony trabeculae show **mosaic appearance**.
- **Complications:**
 - ✓ Fractures.
 - ✓ **High** output heart failure.
 - ✓ Mainly osteosarcoma
 - ✓ Fibrosarcoma.

Osteodystrophy (VIP MCQs)

8. **Rickets** >> is a Defect in bone mineralization in **Children**.

- It starts after 6 months.
- Deficiency of vitamin D, C and phosphorous.
- The main source of vitamin D is sunlight (85%)
- **General:**
 - ✓ Protrusion of the abdomen.
 - ✓ Generalized lymphadenopathy and splenomegaly.
 - ✓ Delayed standing, sitting and walking.
 - ✓ Increased susceptibility to infections and anemia.
- **Skull:**
 - ✓ Delayed closure of fontanelles and sutures
 - ✓ **Craniotabes**
 - ✓ **Delayed dentition**
 - ✓ frontal bossing
- **Chest:**
 - ✓ **Rosary chest**
 - ✓ **Pigeon chest**
 - ✓ **Harrison's sulcus**
- **Pelvis: Trefoil pelvis**

9. **Osteomalacia** is a Defect in bone mineralization in **adults**.

- Lumbar lordosis
- Bending of femur and tibia
- Contracted pelvis

10. **Osteoporosis**

- reduction of bone mass to a level below that required for normal bone support.
- **Generalized Osteoporosis:**
 - ✓ Postmenopausal women and elderly men.
 - ✓ Scurvy.
 - ✓ Osteogenesis Imperfecta.
 - ✓ Endocrinal.

Osteodystrophy (VIP MCQs)

11. Radiation Osteodystrophy:

- Exposure of the growth cartilage plate to radiation field leads to premature closure of **Epiphysis**.

12. Renal osteodystrophy there is **Hypocalcemia**.

13. Endocrinal osteodystrophy is caused by:

- Steroids
- Hyperthyroidism.
- Hyperparathyroidism.

14. Digital clubbing

- It affects mainly the **fingers**.
- Nails are elongated, curved, raise and cyanotic.
- Phalanges are thickened with subperiosteal new bone formation.
- Caused by **Hypoxia**.
- Caused by **chronic** lung diseases.