**Rickets**

 ***Simple choice***

1. What factor influences vitamin ″ D ″ absorption in the small intestine?

1. Normal absorption of lipids
2. Increased concentration of proteins in foods
3. Decrease of electrolytes in the child’s foods
4. Increased concentration of group ″ B ″ vitamins in child’s food
5. Increased concentration of glucides in child’s food

2. What metabolit of vitamin ″ D ″ is the most active ?

1. Cholecalciferol
2. 7 - dihydroxycholecalciferol
3. 25 - oxyvitamin D 3
4. 24,25 - dioxyvitamin D 3
5. 1,25 - dioxyvitamin D 3.

3. The formation of metabolit 1,25 ( OH ) 2 D in kidneys is stimulated by the following factors,

 except:

1. Hypocalcemia
2. Hypercalcemia
3. Increased concentration of parathormone
4. Hypovitaminosis ″ D ″
5. Hypophosphatemia

4. In what organ is synthesized the most active metabolit of vitamin ″ D ″?

1. Skin
2. Intestine
3. Liver
4. Kidneys
5. Stomach

5. In which of the following alimentary products has the highest concentration of vitamin ″ D?

1. Mother’s milk
2. Cow’s milk
3. Egg yolk
4. Milk formula ″ Malish ″
5. Milk formula ″ Bona ″

6. Hyperplasia of osteoid tissue forms the following symptoms, except:

1. Harrison groove
2. Frontal and parietal skull prominences (bossing)
3. Rickets rosary
4. Rickets bracelets ( thickening of the wrists )
5. ″ Pearl necklace ″

7. What is the daily physiologic requirement in vitamin ″ D ″ in children ?

1. 40 IU
2. 50 IU
3. 200 IU
4. 300 IU
5. 400 IU

8. At which age appear the commonly symptoms of vitamin ″D″ deficient rickets ?

1. 3-4 months
2. 3-4 weeks
3. 20 days - 1 month
4. 3 weeks - 3 months
5. 2- 4 months

9. The IIIrd degree vitamin ″ D ″ deficient rickets is characterized by the following

 symptoms, except :

1. Pronounced bone deformity
2. Severe anemia
3. Severe involvement of internal organs
4. Neuromotor and physical retardation
5. Normal biochemical indices of blood

10. Which of the following is not considered the clinical sign for the onset of vitamin ″D ″ deficient rickets :

1. Craniotabes
2. Increased sweating
3. Occipital alopecia
4. Troubled sleeping
5. Red, stable dermographism

11. The following deformities of thorax can be observed in vitamin ″D″ deficient rickets,

 except :

1. Anterioposterior plate chest
2. Bottomed sternum ( ″shoemaker sternum″ )
3. Pigeon chest
4. The Harrison groove
5. Bulging of thorax in the region of heart

12.In deficient rickets the signs of osteomalacia are the following, except:

1. Craniotabes
2. Increased flexibility of anterior fontanelle margins
3. The Harrison groove
4. Flattened occipital region
5. Occipital alopecia

13. The differential diagnosis of rickets is made with the following diseases, except:

1. Phosphaturic renal diabetes
2. Tubular renal acidosis, type I
3. Acquired pneumonia
4. De Toni - Debre - Fanconi syndrome
5. Vitamin ″D″ dependent rickets

14. What factor does not influence deficient rickets appearance in premature babies ?

1. The absence of exposition at sun light long time after birth
2. Abnormal absorption of liposoluble vitamins
3. Insufficient development of respiratory system
4. More intensive growth of premature babies
5. Insufficient antenatal storage of calcium and phosphorus

15. The pathogenetic mechanisms of rickets are the following, except:

1. Decreased intestinal absorption of calcium
2. Decreased reabsorption of phosphorus at the level of tubular system
3. Increased secretion of parathormone
4. Decreased reabsorption of glucose at the level of tubular system
5. Deficit of bone matrix ossification

 **Multiple choice :**

1. Deficient rickets is characterized by the following periods :

1. Period of onset
2. Period of aggravation
3. Period of reconvalescence
4. Period of postrachitic sequelae
5. Advanced period

2.Choose vitamin ″ D ″ preparations:

1. Calciferol
2. Oxydevit
3. Calcidiol
4. Calcitriol
5. Bio- splat

3. The classification of deficient rickets, proposed by S.O.Dulitzkii, includes :

1. Period of disease
2. Degree of disease worsening
3. Evolution of disease
4. Etiologic factor
5. Character of cardiovascular system affection

4. Select the signs of skull affection during the deficient rickets state:

1. Craniotabes
2. Absence of occipital part flattening
3. Shaped head
4. Olympian forehead
5. Frontal and parietal proeminences ( bossing )

5. Functions of metabolit 1,25 ( OH ) 2 D 3 are :

1. It does not influence the intestinal absorption of calcium
2. It influence the bones mineralization
3. It influence the synthesis of osteocalcine
4. It increase the reabsorption of calcium and phosphorus in renal tubules
5. It influence the muscular contractibility

6. Metabolit 1,25 – dihydrocholecalciferol influences ?

1. Small intestine
2. Kidneys
3. Lungs
4. Muscular system
5. Paratyroid glands

7. The synthesis of 25 ( OH ) D 3 in the liver is activated by :

1. Hypocalcemia
2. Hypovitaminosis ,, D’’
3. Hyperparathyroidism
4. Hypercalcemia
5. Hypovitaminosis ,, A’’

8. What is the role of parathormone in the pathogenesis of deficient rickets ?

1. It mobilizes the calcium from bones in conditions of hypercalcemia
2. It stimulates the synthesis of 1,25 (OH )2 D3
3. It stimulates the reabsorption of calcium and magnesium in renal tubules
4. It increases the excretion of phosphates with urine
5. It increases the excretion of bicarbonates with urine

9.The signs of muscular hypotonia observed in deficient rickets are :

1. The bell-shaped thorax
2. The “frog” abdomen
3. Breaking up on the right abdomenal muscle or rupture?
4. Dorsolumbar kyphosis
5. Harrison groove

10. Nonspecific antenatal prophylaxis of rickets includes :

1. Unreasonable use of maternity leave
2. Adherence to a well thought regimen
3. Walking in the fresh air
4. Alimentation of pregnant woman according to physiologic requirements
5. Prenatal care of pregnant women with increased risk of precocious rickets development in babies after birth

11. The evolution of deficient rickets can be :

1. Acute
2. Subacute
3. Recurrent
4. Latent
5. Progressive

12. What processes occur at the level of long bones during the period of body growth ?

1. The process of ossification
2. The accumulation of vitamin D in bone tissue
3. The process of bone reabsorption, connected specifically by skeletal

 calcium mobilization for constant maintenance of calcemia

1. The process of bone modelling
2. Hyperplasia of osteoid tissue

13. In what organs does the metabolization of vitamin D’take place ?

1. Skin
2. Kidneys
3. Liver
4. Lungs
5. Intestine

14. What dental disorders are observed in case of acquired deficient rickets?

1. Delayed eruption of temporary teeth
2. Hypoplasia of enamel
3. Predisposition to caries of permanent teeth
4. Precocious eruption of permanent teeth
5. Precocious eruption of temporary teeth

15. The following data are used for deficient rickets diagnosis :

1. Clinical examination
2. Biochemical changes in blood
3. Radiologic data with characteristic changes
4. Indices of physical development
5. Functional state of cardiovascular system

16. Physiologic effects of 1,25 ( OH )2 D3 at the level of muscles, are ?

1. Maintenance of normal muscular tonus
2. Provision of normal contractibility force
3. Influences on the increasing of ATP quantity in muscles
4. Increases of the muscular proteins synthesis
5. Decrease of the muscular proteins synthesis

17. What factors decrease the efficacy of solar rays ?

1. Nordic latitude
2. Usual glass
3. Increased concentration of dust in air
4. Spring season
5. Skin pigmentation

18. What are the physiologic effects of 1,25 (OH)2 D3 at the level of bones ?

1. It increases the bone mineralization
2. The role of control on bone calcium and phosphorus mobilization process,

 realized by parathormone

1. It nfluences the skeleton growing
2. It stops the process of ossification
3. It stimulates the osteoid tissue hyperplasia

19. In deficient rickets the following degrees of severity are distinguished :

1. Degree 0
2. Degree I
3. Degree II
4. Degree III
5. Degree IV

20. Deficient rickets is characterized by the following changes at the level of long bones:

1. Rickets ,, bracelets’’
2. Coxa vara
3. Genu varum
4. Deformations in the form of ,,0’’ or ,,X’’
5. Harrison groove

21. Positive diagnosis of deficient rickets is based on :

1. Clinical picture
2. Normal or decreased serum calcium
3. Hyperphosphatemia
4. Increased level of parathormone in blood
5. Decreased level of vitamin D metabolits ( 25 (OH)D3; 1,25 (OH)2 D3)

22. What factors influence the lesions of bones in deficient rickets ?

1. Decreased resistance of bone to mechanical loading
2. Insufficient mineralization of bone organic matrix
3. Hyperplasia of cartilaginous cells
4. Deformation of bones
5. Increased concentration of calcium in bones

23. Acute evolution of deficient rickets is characterized by :

1. More frequent appearance in premature babies
2. It occurs in winter-spring period
3. Marked general manifestations
4. Predominance of osteomalacia in the bone affection
5. It occurs commonly in adults

24. Subacute evolution of deficient rickets is characterized by:

1. Moderate manifestation of rickets general signs
2. Predominance of osteoid tissue hyperplasia symptoms
3. Moderate signs of osteomalacia
4. Alkaline phosphatase is not increased

 E. Frontal and parietal bosses are bulged

25.Choose the features of bone system involvement in rickets ?

1. The affections of skull bones prevail in the first 3 months of

 baby ‘s life

1. The affection of thorax prevails at the age of 2-6 months
2. The long bones are affected at the age over 6 months
3. The deformation of legs at the age over 3 months
4. Legs in the form of ,,0’’ or ,,X’’ occur commonly at the age of

 1 year .

**Rickets**

**Correct answers :**

***Simple choice***

1. A
2. E
3. B
4. D
5. C
6. A
7. E
8. B
9. E
10. A
11. E
12. E
13. C
14. C
15. D

***Multiple choice***

1. ABCD
2. ABCD
3. ABC
4. ACDE
5. BCDE
6. ABDE
7. ABC
8. BCDE
9. ABCD
10. BCDE
11. ABC
12. ACD
13. ABC
14. ABC
15. ABC
16. ABCD
17. ABCE
18. ABCD
19. BCD
20. ABCD
21. ABDE
22. ABCD
23. ABCD
24. ABCE ;

25 . ABCE