

Министерство здравоохранения республики Беларусь
Учреждение образования
«Гомельский государственный медицинский университет»

Кафедра патологической физиологии
Обсуждено на заседании кафедры
Протокол №7 от 30.08.2017

МЕТОДИЧЕСКАЯ РАЗРАБОТКА

Для проведения занятия со студентами
3 курса ФПСЗС, обучающихся на английском языке
по патологической физиологии

Тема: Итоговое занятие №2

Theme: Control lesson №2

Время 4 ак. часа

QUESTIONS FOR CONTROL LESSON №2 ON PATHOPHYSIOLOGY FOR MEDICAL STUDENTS OF III YEAR

1. Anemia erythrocytoses: classifications. The causes and mechanisms of changes of physico-chemical properties of blood (osmotic and oncotic pressure, viscosity, erythrocyte sedimentation rate, qualitative protein composition) in various diseases. Characteristics of erythrocyte indices.
2. Posthemorrhagic anemia: types, causes, mechanisms, peripheral blood picture. Compensatory-adaptive reactions in acute blood loss.
3. Dyserythropoietic anemias: classification, etiology, pathogenesis, peripheral blood picture.
4. Hemolytic anemia: classification, etiology, pathogenesis, peripheral blood picture.
5. Causes of the structure and function disorders of certain types white blood cells, their role in pathological processes. Leukogram and its analysis. Nuclear shift index.
6. Leukocytosis, leukopenia: types, causes, mechanisms, manifestations in peripheral blood and organs of leukopoiesis.
7. Leukemia. Classification, etiology, pathogenesis. The mechanisms of underlying disorders in the body in leukemia.
8. Disorders of coagulation hemostasis: types, causes, mechanisms of development. Types of bleeding, a common characteristic.
9. Violations of vascular-platelet hemostasis: types, causes, mechanisms of development.
10. Disseminated intravascular coagulation syndrome: classification, etiology, pathogenesis, stages.
11. Disorders of the circulatory system functions: etiology and pathogenesis. Risk factors in the occurrence of cardiovascular disease: controlled and uncontrolled.
12. Circulation failure: forms, general hemodynamic parameters and manifestations.
13. Heart failure, types. Overload form of heart failure. Overload by volume and blood pressure in the cavity of the heart, etiology and pathogenesis. Systolic and diastolic failure. Myocardial form of heart failure: causes and mechanisms.
14. Immediate and long-term intracardiac compensation mechanisms of heart failure. Myocardial hypertrophy, features of the heart hypertrophy, mechanisms of decompensation.
15. Extracardiac compensation mechanisms of heart failure. Mechanisms of extracardiac compensation: effects and pathogenetic valuation.
16. Heart failure: general and hemodynamic manifestations. Principles of treatment and prevention of heart failure.
17. Coronary insufficiency, absolute and relative. Pathogenesis of ischemic syndromes in coronary insufficiency. Clinical forms of coronary insufficiency.
18. Ischemic heart disease: forms, causes, mechanisms of development. Stenocardia. Myocardial infarction: metabolic disorders, electrogenic and contractile properties of myocardium in the ischemic area and beyond.
19. Complications and outcomes of stenocardia and myocardial infarction.
20. Restored blood flow in the ischemic area. Pathogenesis and clinical manifestations of myocardial reperfusion injury.
21. Noncoronary forms of heart damage. Myocardial damage in systemic diseases (diabetes mellitus, vitamin deficiency diseases, obesity, endocrine disorders, collagen).
22. Cardiac arrhythmia. Types, causes, mechanisms, signs on the electrocardiogram. Disorders of total and coronary circulation in cardiac arrhythmia.
23. Arterial hypertension. Primary (essential) hypertension, etiology, theories of pathogenesis, factors of stabilization in high blood pressure.
24. Secondary ("symptomatic") hypertension, types, causes and mechanisms of development. Hemodynamics in different types of hypertension.
25. Complications and consequences of hypertension. Damage of target organ in hypertension. Experimental models of hypertension.
26. Arterial hypotension. Types, causes and mechanisms of development. Hypotension disease.
27. Atherosclerosis: causes, mechanisms of development, risk factors. Relationship between hypertension and atherosclerosis. The role of atherosclerosis in the pathology of cardiovascular system.
28. Cerebral circulation disorders: general etiology and pathogenesis, mechanisms of compensation. Characteristics of main forms of cerebral circulation disorders. Principles of therapy.
29. Respiratory disorders: etiology and pathogenesis. Respiratory failure: stages and manifestations.

Shortness of breath: types and mechanisms of development.

30. Alveolar hypoventilation: the causes and mechanisms of obstructive and restrictive types.
31. Upper airway obstruction. Acute mechanical asphyxia, causes and mechanisms of development.
32. Obstruction of lower respiratory tract and pathogenesis of emphysematous and *bronchitis* types of obstruction.
33. Violations of respiration regulation. Reflex respiratory disorders, lesions of respiratory center. Pathological forms of breathing.
34. Disorders of pulmonary blood flow: causes and consequences. Total failure of pulmonary perfusion. Pulmonary hypertension, pre- and postcapillary forms. Local unevenness of ventilation-perfusion relationships.
35. Alveolar-capillary diffusion disorders: causes, consequences. Mixed forms of respiratory disorders.
36. Respiratory distress syndrome of adults and infants: etiology and pathogenesis of acute respiratory failure.
37. Compensatory-adaptive processes in respiratory system on damage its individual components. Alveolar hyperventilation: causes, mechanisms and consequences.
38. Changes in ventilation parameters, blood gas and acid-base status in respiratory failure and during hyperventilation. Pathophysiological principles of prevention and treatment
39. Disorders of digestive system: general etiology and pathogenesis. Functional relation of various parts of digestive system in pathological conditions. Disorders of digestive in metabolism disturbances.
40. Disorders of appetite, taste, salivation, chewing, swallowing, esophageal function.
41. Violations of reservoir, secretory and motor functions of stomach. Types of abnormal secretion. Hypo- and hyperkinetic state of stomach.
42. Violations of evacuation of gastric contents: belching, heartburn, nausea, and vomiting. Relation of secretory and motor disorders.
43. Gastric ulcer, duodenal ulcer: etiology, pathogenesis, manifestations
44. Dysfunction of small and large intestines. Disorders of secretory function. Importance of damage of enterocytes, pancreatic achylia, acholia, role of gastrointestinal hormones. Violations of cavitory and parietal digestion; malabsorption.
45. Intestinal dysmotility. Diarrhea, constipation, intestinal obstruction.
46. Violations of intestinal barrier function, intestinal autointoxication; Coli-sepsis, dysbacteriosis. Enteritis, colitis.
47. Secretory dysfunction of pancreas, acute and chronic pancreatitis.
48. Liver diseases: general etiology and pathogenesis. Role of hepatotropic toxins in pathogenesis of dystrophic, cancer and alcoholic liver lesion.
49. Liver failure: types, causes, pathogenesis, manifestations. Acute hepatic failure, hepatic coma.
50. Liver cirrhosis: etiology and pathogenesis.
51. Hepatitis: etiology and pathogenesis.
52. Liver pathology: main symptoms. Hematologic, endocrinologic, hepatolienal syndromes. Syndrome of portal hypertension.
53. Jaundice, types, causes, mechanisms, manifestations.
54. Glomerular filtration, proximal and distal tubular reabsorption, tubular secretion and excretion: mechanisms of disorders. Mixed disorders
55. Changes in diuresis and urine amount, pathological components of urine by renal and extrarenal origin. Changes in the composition and physico-chemical properties of blood.
56. Tubulopathy: types, causes, mechanisms of development. Urolithiasis.
57. Acute and chronic diffuse glomerulonephritis: etiology, pathogenesis, manifestations
58. Nephrotic syndrome: types, etiology, pathogenesis, manifestations
59. Pyelonephritis: etiology, pathogenesis, manifestations.
60. Acute and chronic renal failure: etiology, pathogenesis, stage, manifestations
61. Endocrine glands: disorders of central regulation mechanisms. Excess, deficiency and imbalance of releasing and inhibiting factors of midbrain. Violation of feedback and self-regulation mechanisms in the neuroendocrine system, trans- and paraadenopituitary mechanisms. Psychogenic endocrinopathies.
62. Primary disorders of hormones synthesis in peripheral endocrine glands as a consequence of pathological processes in the gland tissue, on depletion that basis of long-term hyperactivity, lack of necessary components, genetic defects in biosynthesis of hormones. Iatrogenic endocrinopathy.

63. Realization of hormones effects: peripheral (exoadenous) mechanism of violations. Disorders of binding and "liberation" hormones with blood proteins; blockade, excessive destruction, and other disorders of metabolism in tissues; absence or change the properties of hormones receptors in target cells.
64. Main types of endocrine disorders. Hypo-, hyper-and dysfunctional; mono-and pluriglandular; partial and total endocrinopathy; early and late; primary, secondary, tertiary; absolute, relative, absolute-relative forms.
65. Endocrine disorders: general characteristics of detection methods and principles of therapy.
66. Role of endocrine disorders in etiology and pathogenesis of nonendocrine diseases.
67. Pathology of hypothalamic-pituitary system. Hyperfunction and hypofunction of the anterior pituitary lobe.
68. Hyper-and hypofunction of posterior pituitary lobe. Total pituitary insufficiency.
69. Pathophysiology of adrenal glands: hypo-and hyperfunction status, manifestations.
70. Pathophysiology of thyroid gland: hypo-and hyperthyroidism, thyrotoxicosis, manifestations.
71. Pathophysiology of parathyroid glands: hypoparathyroidism, hyperparathyroidism, manifestations.
72. Pathophysiology of sexual glands. Hypo-and hypergonadism on women and men, manifestations.

Basis literature:

1. Литвицкий, П. Ф. Патопфизиология = Pathophysiology : лекции, тесты, задачи : учеб. Пособие / П. Ф. Литвицкий, С. В. Пирожков, Е. Б. Тезиков. – М. : ГЭОТАР-Медиа, 2016.– 432 с.

Additional literature:

2. Kumar, V. Robbins and Cotran Pathologic basis of disease, 7th Edition / V.Kumar, A.K. Abbas, N. Fausto. — Philadelphia: Elsevier Inc., 2005. – 1629 p. Режим доступа: <http://www.rkmyat.in/up1/34/1629.pdf>. – Дата доступа: 30.08.2016.
3. Кидун, К. А. Тестовые задания по патологической физиологии = Test tasks on pathological physiology : в 3-х ч. Ч. 3, Частная патопфизиология : учеб.-метод. пособие для студ. 3 курса фак. по подг. спец. для зарубеж. стран, обуч. на англ. яз. по спец. «Лечебное дело», мед. вузов / А. К. Кидун. – Гомель : ГомГМУ, 2015. – 113 с.
4. Научная электронная библиотека eLIBRARY.RU [Электронный ресурс] / Научная электронная библиотека. – М., 2005. – Режим доступа: <http://www.elibrary.ru>. – Дата доступа: 26.08.2017.