Ministry of Health of the Republic of Belarus

Educational Institution "Vitebsk State Order of Peoples' Friendship

Medical University"

 Department of Faculty Therapy and Cardiology

with a course of the Faculty of Advanced Training and retraining

Approved at the meeting of the department

Protocol No. 10 from 09.01.2025

**METHODOLOGICAL GUIDELINES FOR STUDENTS**

**for practical training**

in the academic discipline "Internal diseases"

specialties 1-79 01 01 "Medical business"

4th year, Faculty of Medicine

full-time education

Lesson topic: Liver cirrhosis. Hereditary liver diseases

Duration: 6 hours

Compiled by:

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**Motivational characteristics of the need to study the topic**

**Goals and objectives of the lesson:**

***The educational objectives*** are to develop students'

scientific knowledge about:

the importance of external and internal environmental factors in the development of liver cirrhosis, hereditary liver diseases;

mechanisms of pathogenesis of liver cirrhosis, hereditary liver diseases;

typical clinical manifestations of liver cirrhosis, hereditary liver diseases;

modern methods of diagnostics of liver cirrhosis, hereditary liver diseases;

strategy and tactics of management of patients with liver cirrhosis, hereditary liver diseases;

skills and abilities necessary for:

individual examination of patients with cirrhosis of the liver, hereditary liver diseases;

diagnosis and differential diagnostics of liver cirrhosis and hereditary liver diseases;

drawing up an examination plan for patients with liver cirrhosis and hereditary liver diseases, evaluating the results of laboratory and instrumental methods of investigation;

selection and prescription of drugs for the treatment of liver cirrhosis, hereditary liver diseases;

prevention of liver cirrhosis and hereditary liver diseases;

providing emergency medical care in acute liver failure

***Developmental goals*** consist in the formation and development of mental properties of the student, including attention, sensory and perceptual properties, mnemic and thinking properties, psychomotor properties, professional skills and abilities.

***Educational objectives*** are aimed at the formation of personal qualities of students in the course of the training session: a sense of mutual assistance, teamwork, subordination, tact, empathy, responsibility for the assigned work, diligence, accuracy, conscientiousness, understanding the importance of the profession, pride in the achievements of national medicine.

**During the study of the topic of the training session the student should**

**study**:

basic concepts: liver cirrhosis, liver fibrosis, liver failure, portal hypertension, ascites, hepatic hydrothorax, spontaneous bacterial peritonitis, esophageal varices, hepatic encephalopathy, hepatorenal syndrome, hepatopulmonary syndrome, hepatocardial syndrome, Gilbert syndrome, Kriegler-Nayar syndrome, Dabin-Johnson syndrome, Rotor syndrome;

epidemiology, etiology, pathogenesis, predisposing factors, classifications, clinical manifestations, complications, diagnostic methods, differential diagnosis, treatment, primary and secondary prevention, medical examination and prognosis in liver cirrhosis, hereditary liver diseases;

**learn how to:**

conduct an interview (collection of complaints and anamnesis) and clinical examination of patients with liver cirrhosis, hereditary liver diseases;

to make a plan of examination of patients with cirrhosis of the liver, hereditary liver diseases;

interpret the results of laboratory and instrumental investigations in patients with liver cirrhosis and hereditary liver diseases;

formulate preliminary and final diagnosis in liver cirrhosis and hereditary liver diseases;

to execute medical documentation (medical history, appointment sheet, referrals for laboratory and instrumental examinations and consultations, prescriptions for basic medicines);

**practice:**

skills to assess the severity of cirrhosis of the liver, emergency care in acute liver failure; interpret the results of the general blood test, general urinalysis, biochemical study of serum, coagulogram, ECG, radiographs, scans, angiograms, scintigrams, ultrasound of large arterial vessels, heart, abdominal organs and kidneys; formulate the diagnosis of cirrhosis of the liver, hereditary liver diseases.

**Practical skills to be formed during the course, including with the use of simulation training technologies:**

1. Emergency treatment of acute liver failure.

2. Interpretation of the results of the general blood count, urinalysis, biochemical study of blood serum, coagulogram, ECG, X-rays, scans, angiograms, scintigrams, ultrasound of large arterial vessels, heart, abdominal organs and kidneys.

3. Formulation of the diagnosis.

**Interdisciplinary and intradisciplinary links**

When studying the topic use the knowledge and skills obtained during the study of normal and pathological human anatomy, normal and pathological human physiology, pharmacology, propaedeutics of internal diseases.

**Theoretical part**

**Questions for classroom monitoring during the lesson:**

1. Liver cirrhosis: definition, etiology, pathogenesis, classification, main clinical syndromes, severity, diagnostic methods, diagnostic criteria, course variants, complications, differential diagnosis.
2. Hepatorenal, hepatopulmonary, hepatocardial syndromes. Treatment of liver cirrhosis and complications, prevention, medical rehabilitation, prognosis.
3. Acute and chronic liver failure: causes of disease, pathogenesis, clinical picture, diagnostic methods, treatment, prevention, prognosis.
4. Hereditary liver diseases (Gilbert syndrome, Crigler-Najjar, Dubin-Johnson, Rotor): genetic defects, features of bilirubin metabolism, clinical manifestations, diagnosis, treatment, prognosis.

**Practical part**

1. *Curation of patients*: collection of complaints and medical history of patients with cirrhosis, hereditary liver disease; objective examination; drawing up an examination plan; interpretation of the results of laboratory and instrumental methods of examination; formulation of diagnosis; drawing up a treatment plan, algorithm of emergency medical care in acute liver failure. Registration of medical documentation.
2. *Modeling and solving situational tasks.*

**Tasks and questions to control the learning of the topic**

1. Prescribe basic drugs for the treatment of liver cirrhosis, hereditary liver diseases (omeprazole, ademetionine, ornithine).

2. Justify and formulate a diagnosis when solving a case study.

3. Test tasks on the topic of practical training.

**Questions for guided independent work**

Guided independent work is not provided for by the educational institution’s curriculum for the academic discipline “Internal Medicine” for the specialty 1-79 01 01 “General Medicine”.

**Literature**

**Main:**

1. Internal Diseases = Внутренние болезни : textbook : in 2 vol. Vol. 1 : / edited by A. I. Martynov, J. D. Kobalava, S. V. Moiseev. - Moscow : GEOTAR-Media, 2022. - 683 p. : ill. - Bibliogr.: p. 677. - ISBN 978-5-9704-6766-4. - Режим доступа: https://www.studentlibrary.ru/book/ISBN9785970467664.html – 30 экз.

2. Internal Diseases = Внутренние болезни : textbook : in 2 vol. Vol. 2 : / edited by A. I. Martynov, J. D. Kobalava, S. V. Moiseev. - Moscow : GEOTAR-Media, 2022. - 614 p. : ill. - ISBN 978-5-9704-6767-1. - Режим доступа*:* https://www.studentlibrary.ru/book/ISBN9785970467671.html – 30 экз.

3. Special propedeutics of internal diseases : lecture course / Vitebsk State Medical University, Dep. of Propedeutics of Internal Diseases ; comp. by L. M. Nemtsov. - 2-е изд. - Vitebsk : VSMU, 2016. - 318 p. - Bibliogr.: p. 318. - ISBN 978-985-466-822-2. - Режим доступа: https://elib.vsmu.by/handle/123/9837 - 317 экз.

4. Немцов, Л. М. Пропедевтика внутренних болезней = Propaedeutics of Internal Diseases : учеб. пособие на англ. яз. : для иностр. студентов учреждений высш. образования по специальности "Лечебное дело" : [в 2 ч.]. Ч. 2 : : Обследование органов систем пищеварения, мочевыделения, желез внутренней секреции, крови и опорно-двигательного аппарата / Л. М. Немцов, В. А. Прищепенко, Ю. Г. Юпатов ; М-во образования Республики Беларусь, УО "Витебский гос. мед. ун-т". - Витебск : [ВГМУ], 2023. - 423 с. : ил. - Библиогр.: с. 421-423. - ISBN 978-985-580-165-9. - Режим доступа: https://elib.vsmu.by/handle/123/25144 Гриф(приоритет документа): МО - 250 экз.

**Additional:**

5. Examination of patients in clinic of internal diseases = Обследование пациентов в клинике внутренних болезней : educational instruction for students of 2nd and 3rd years in specialties "General Medicine" and "Stomatology" / Г. И. Юпатов [и др.] ; Ministry of Public Health of Republic of Belarus, EI "Vitebsk State of the order of International Friendship Medical University", Dep. of Internal Diseases Propedeutics. - Vitebsk : VSMU, 2016. - 59 p. - Bibliogr.: p. 31. - ISBN 978-985-466-838-3. – 254 экз.

6. Family Medicine : in 3 books : textbook for students of higher medical education establishments - medical universities, institutes and academies. Book 2 : : Symptoms and Syndromes in Clinical Course of Internal Diseases / L. S. Babinets [и др.] ; edited by O. M. Hyrina, L. M. Pasiyeshvili. - Kyiv : AUS Medicine Publishing, 2018. - 375 p. : ill. - Bibliogr. at the end of the chapters. - ISBN 978-617-505-652-3. Гриф(приоритет документа): МО Укр. *-* 1 экз*.*

7. Family Medicine : in 3 books : textbook for students of higher medical education establishments of the 4th level of accreditation. Book 1 : : General Issues of Family Medicine / O. M. Hyrina [и др.] ; edited by O. M. Hyrina, L. M. Pasiyeshvili. - Kyiv : AUS Medicine Publishing, 2016. - 558 c. : ill. - Bibliogr. at the end of the chapters. - ISBN 978-617-505-494-9. Гриф (приоритет документа): МО Укр. - 1 экз.

8. Internal Medicine: Critical Care : textbook / Babak O. Ya. [и др.] ; edited by O. Ya. Babak, O. M. Bilovol. - Kyiv : AUS Medicine Publishing, 2018. - 367 p. : ill. - ISBN 978-617-505-636-3. Гриф(приоритет документа): УМО Укр. - 1 экз.

9. Kumar & Clark's Clinical Medicine / ed. by Parveen Kumar, Michael Clark ; editor, Online Content Adam Feather. - 9th ed. - Edinburgh [etc.] : Elsevier, 2017. - XIV, 1437 p. : ill. - Bibliogr. at the end of the chapters. - ISBN 978-0-7020-6601-6. - 1 экз.

10. Внутренние болезни = Internal diseases : учеб. пособие для студентов фак. иностр. учащихся и магистрантов (с англ. яз. обучения) / В. М. Пырочкин [и др.] ; М-во здравоохранения Республики Беларусь, УО "Гродненский гос. мед. ун-т" ; под общ. ред. В. М. Пырочкина. - Гродно : ГрГМУ, 2016. - 389 с. : ил. - Библиогр. в тексте. - ISBN 978-985-558-617-4. – 1 экз.

11. Дополнительные методы исследования в клинике внутренних болезней. Практикум = Diagnostic methods in the internal medicine. Workbook : учеб.-метод. пособие для студентов учреждений высш. образования, обучающихся по специальности 1-79 01 01 "Лечебное дело" / Э. А. Доценко [и др.] ; М-во здравоохранения Республики Беларусь, Белорус. гос. мед. ун-т, Каф. пропедевтики внутрен. болезней. - 4-е изд. - Минск : БГМУ, 2024. - 158 с. - Загл. обл.: Diagnostic methods in the internal medicine. Workbook. - ISBN 978-985-21-1556-8. - Режим доступа: https://rep.bsmu.by/handle/BSMU/44425 Гриф(приоритет документа): УМО – 1 экз.

**Regulatory legal acts:**

12. О здравоохранении: Закон Республики Беларусь от 18 июня 1993 г. № 2435-XII: с изменениями и дополнениями. **Литература** / ООО «Профессиональные правовые системы». – Минск, 2019.