International round-table meeting

Prevention and control of Viral Hepatitis in the Russian Federation: lessons learnt and the way forward

October 25 – 26, 2018, Moscow, Russia

EASL Recommendations on Treatment of Hepatitis C 2018 through the prism of Russian realities

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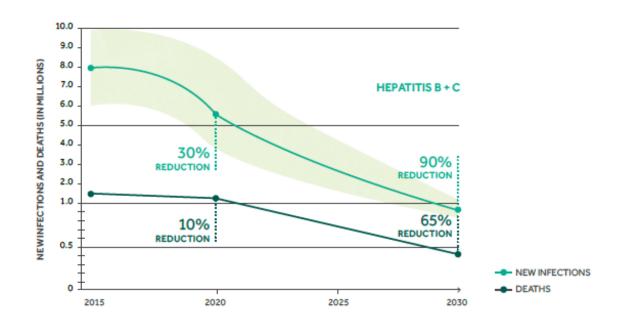
GLOBAL HEALTH SECTOR STRATEGY ON

VIRAL HEPATITIS 2016–2021

TOWARDS ENDING VIRAL HEPATITIS

GOAL

Eliminate viral hepatitis as a major public health threat by 2030.



European Association for the Study of the Liver*

Iver disease, with approximately 71 million chronically infected individuals worldwide. Clinical care for patients with HCV-related liver disease has advanced considerably thanks to an enhanced understanding of the pathophysiology of the dispatients with acute and chronic HCV infections in 2018 and mortality. 10-16 on wants

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Introduction

Hepatitis C virus (HCV) infection is one of the main causes of chronic liver disease worldwide. The long-term natural history of HCV infection is highly variable. The hepatic injury can range from minimal histological changes to extensive fibrosis and cirthosis with or without hepatocellular carcinoma (HCC). There Methodology and improvements in therapy and prevention.

at risk of life-threatening complications. However, hepatic fbro-

failure and portal hypertension is reduced after an SVR. Recent Hepatitis C virus (HCV) infection is a major cause of chronic data suggest that the risk of HCC and liver-related mortality is significantly reduced, but not eliminated, in patients with cirrhosis who clear HCV compared to untreated patients and non-sustained virological responders, especially in the presence of cofactors of liver morbidity, such as the metabolic syndrome, ease, and because of developments in diagnostic procedures harmful alcohol consumption and/or concurrent hepatitis B and improvements in the rapy and prevention. These European virus (HBV) infection. 3-8 HCV is also associated with a number Association for the Study of the Liver Recommendations on of extra-hepatic manifestations and viral elimination induces Treatment of Hepatitis C describe the optimal management of reversal of most of them with reduction of all-cause

These EASL Recommendations on Treatment of Hepatitis C © 2018 European Association for the Study of the Liver. are intended to assist physicians and other healthcare providers. as well as nationts and other interested individuals, in the clinical decision-making process, by describing the current optimal management of patients with acute and chronic HCV infections. These recommendations apply to therapies that have been approved by the European Medicines Agency and other national European agencies at the time of their publication.

are approximately 71 million chronically infected individuals. These EASL recommendations have been prepared by a panel of worldwide.1.2 many of whom are unaware of their infection, experts chosen by the EASL Governing Board. The recommendawith important variations according to the geographical area. tions are primarily based on evidence from existing publications Ginical care for patients with HCV-related liver disease has and presentations at international meetings. In the absence of advanced considerably during the last two decades, thanks to such evidence, the experts' personal experiences and opinions an enhanced understanding of the pathophysiology of the dis- have been considered. Where wer possible, the level of evidence ease, and because of developments in diagnostic procedures and recommendation are cited. The evidence and recommendations have been graded according to the Grading of Recommen-The primary goal of HCV therapy is to cure the infection, i.e. dations Assessment, Development and Evaluation (GRADE) to achieve a sustained virological response (SVR) defined as system. The strength of recommendations reflects the quality undetectable HCV RNA 12 weeks (SVR12) or 24 weeks (SVR24) of underlying evidence. The quality of the evidence in the recafter treatment completion. An SVR corresponds to a cure of ommendations has been classified into one of three levels; high the HCV infection, with a very low chance of late relapse. An (A), moderate (B) or low (C). The GRADE system offers two SVR is generally associated with normalisation of liver enzymes grades of recommendation; strong (1) or weak (2) (Table 1). and improvement or disappearance of liver necroinflammation. Thus, the recommendations consider the quality of evidence: and fibrosis in patients without cirrhosis. Patients with the higher the quality of evidence, the more likely a strong recadvanced fibrosis (METAVIR score F3) or cirrhosis (F4) remain ommendation is warranted; the greater the variability in values and preferences, or the greater the uncertainty, the more likely a have been approved by the EASL Governing Board.

Diagnosis of acute and chronic hepatitis C

Anti-HCV antibodies are detectable in serum or plasma by enzyme immunoassay (EIA) in the vast majority of patients with HCV infection, but EIA results may be negative in early acute

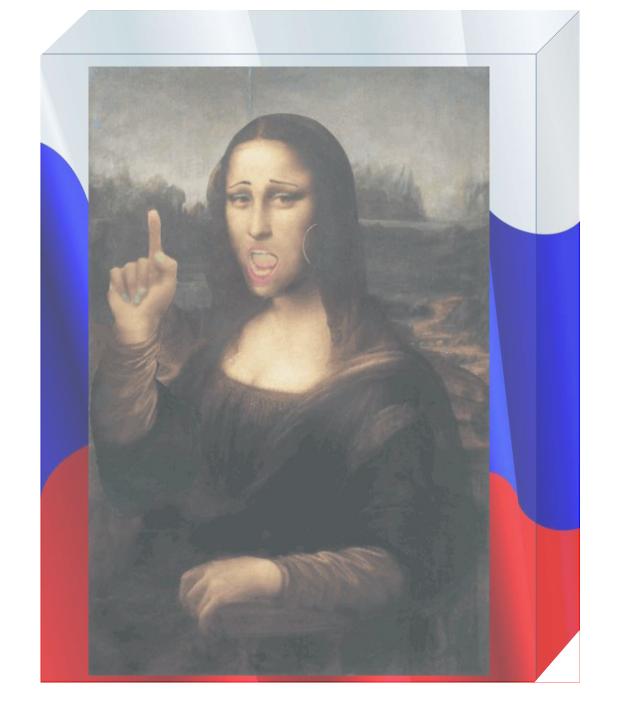


Wedenseyer.

sis may regress and the risk of complications such as hepatic weaker recommendation is warranted. The recommendations * Clinical practice guidelines panel: Quit: Jean Michel Rowletsky; EASL governing bard spresentative Pancesco Nego: Panel members: Alexão Aglemo, Marina

Brienguer, Olav Dulgard, Gerffley Duchelko, Rona Marra, Maccimo Puod, Heiner Corresponding author: Address: European Association for the Study of the User. (EASL), The EASL Building - Home of Hepathlogy, 7 rue Daubin, CH 1203 Geneva. Sebzerland, Tel.: +61 (0) 22 807 (0 60; Six +61 (0) 22 328 07 24 E-mail address: sustablic sites stabilic seru.





Indications for treatment: who should be treated?

Recommendations

- All patients with HCV infection must be considered for therapy, including treatment-naïve patients and individuals who failed to achieve SVR after prior treatment (A1).
- Treatment should be considered without delay in patients with significant fibrosis or cirrhosis (METAVIR score F2, F3 or F4), including compensated (Child-Pugh A) and decompensated (Child-Pugh B or C) cirrhosis, in patients with clinically significant extra-hepatic manifestations (e.g. symptomatic vasculitis associated with HCV-related mixed cryoglobulinaemia, HCV immune complex-related nephropathy and non-Hodgkin B-cell lymphoma), in patients with HCV recurrence after liver transplantation, in patients at risk of a rapid evolution of liver disease because of concurrent comorbidities (non-liver solid organ or stem cell transplant recipients, HBV coinfection, diabetes) and in individuals at risk of transmitting HCV (PWID) men who have sex with men with high-risk sexual practices, women of childbearing

- age who wish to get pregnant, haemodialysis patients, incarcerated individuals (A1).
- Patients with decompensated (Child-Pugh B or C) cirrhosis and an indication for liver transplantation with a MELD score ≥18-20 should be transplanted first and treated after transplantation (B1).
- If the waiting time on a liver transplant list is more than 6 months, patients with decompensated (Child-Pugh B or C) cirrhosis with a MELD score ≥18-20 can be treated before transplantation, although the clinical benefit for these patients is not well established (B2).
- Treatment is generally not recommended in patients with limited life expectancy due to non-liver-related comorbidities (B2).

People who inject drugs and patients receiving opioid substitution therapy

Recommendations

- PWIDs should be routinely and voluntarily tested for anti-HCV antibodies and HCV RNA. PWIDs who are HCV RNA-negative should be tested for HCV RNA annually and following any high-risk injecting episode (A1).
- PWIDs should be provided with appropriate access to OST and clean drug injecting equipment as part of widespread comprehensive harm reduction programs, including in prisons (A1).
- All PWIDs who are infected with HCV have an indication for antiviral therapy, as DAA-based therapies are safe and effective in HCV-infected patients receiving OST, those with a history of injecting drug use and those who recently injected drugs (A1).
- HCV treatment should be offered to HCV-infected patients in prison (B1).
- Pre-therapeutic education should include discussions of HCV transmission, risk factors for fibrosis progression, treatment, reinfection risk, and harm reduction strategies (B1).
- In patients on OST, DAA-based anti-HCV therapy does not require methadone or buprenorphine dose adjustment (A1).
- Harm reduction, education and counselling should be provided to PWIDs in the context of HCV treatment to prevent HCV reinfection following successful treatment (B1).
- Following SVR, monitoring for HCV reinfection ideally through bi-annual, at least annual HCV RNA assessment should be undertaken in PWIDs with an ongoing risk behaviour (A1).
- Retreatment should be made available, if reinfection is identified during post-SVR follow-up (A1).

- 0 ...
- Употребляющие инъекционные наркотики лица должны быть обеспечены доступом к заместительной опиоидной терапии и чистым оборудованием для инъекционного употребления наркотиков ..., в том числе в тюрьмах
- Всем употребляющим инъекционные наркотики лицам, инфицированным НСV, показана противовирусная терапия ПППД
- Лечение должно быть предложено HCVинфицированным пациентам в тюрьме
- 0 ...



Table 3. HCV DAAs approved in Europe in 2018 and recommended in this document.

Product	Presentation	Posology
Pangenotypic drugs or drug co	ombinations	
Sofosbuvir	Tablets containing 400 mg of sofosbuvir	One tablet once daily
Sofosbuvir velpatasvi	Tablets containing 400 mg of sofosbuvir and 100 mg of velpatasvir	One tablet once daily
Sofosbuvir/velpatasvir/ voxilaprevir	Tablets containing 400 mg of sofosbuvir, 100 mg of velpatasvir and 100 mg of voxilaprevir	One tablet once daily
Glecaprevir/pibrentasvir	Tablets containing 100 mg of glecaprevir and 40 mg of pibrentasvir	Three tablets once daily
Genotype-specific drugs or dr	ug combinations	
Sofosbuvir (ledipasvir)	Tablets containing 400 mg of sofosbuvir and 90 mg of ledipasvir	One tablet once daily
Paritaprevir/ombitasvir/ ritonavir	Tablets containing 75 mg of paritaprevir, 12.5 mg of ombitasvir and 50 mg of ritonavir	Two tablets once daily
Dasabuvir	Tablets containing 250 mg of dasabuvir	One tablet twice daily (morning and evening)
Grazoprevir/elbasvir	Tablets containing 100 mg of grazoprevir and 50 mg of elbasvir	One tablet once daily

DAA direct-acting antiviral: HCV. hepatitis C virus.



- drugs not registered in the Russian Federation

The choice in Russia is poorer than in Europe,





but this is a choice from what is available!

- If cirrhosis can be reliably excluded by means of a noninvasive marker in treatment-naïve patients, the combination of glecaprevir and pibrentasvir can be administered for 8 weeks only (A1).
- Generic drugs can be used, provided that quality controls are met and guaranteed by the provider (A1).
- Possible drug-drug interactions should be carefully checked and dose modifications implemented when necessary (A1).
- Given the high SVR12 rates expected with these regimens across all groups of patients if adherent, checking SVR12 12 weeks after the end of treatment is dispensable (B1).
- Patients with high-risk behaviours and risk of reinfection should be tested for SVR12 and yearly thereafter whenever possible (B1).
- In patients with advanced fibrosis (F3) or compensated cirrhosis (F4), post-SVR surveillance for the diagnosis of HCC and linkage to care must be provided when treatment for HCC is available (A1).

 Дженерики могут использоваться при условии, что контроль качества обеспечивается и гарантируются поставщиком

Criminal Code of the Russian Federation



Статья 238.1. Обращение фальсифицированных недоброкачественных и незарегистрированных лекарственных средств, медицинских изделий и оборот фальсифицированных биологически активных добавок

(введена Федеральным законом от 31.12.2014 N 532-Ф3)

Article 238.1. Circulation of counterfeit, substandard and unregistered medicines, medical devices and turnover of counterfeit dietary supplements

(introduced by Federal Law dated December 31, 2014 N 532-FZ)

Recommendations

- Patients with decompensated (Child-Pugh B or C) cirrhosis should be treated in experienced centres with easy access to liver transplantation and close monitoring during therapy is required, with the possibility of stopping therapy with evidence of worsening decompensation during treatment (A1).
- Patients with decompensated (Child-Pugh B or C) cirrhosis, without HCC, awaiting liver transplantation with a MELD score <18-20 should be treated prior to liver transplantation. Treatment should be initiated as soon as possible in order to complete a full treatment course before transplantation and assess the effect of SVR on liver function, because significant improvement in liver function may lead to delisting in selected cases (A1).
- Protease inhibitors-containing regimens are contraindicated in patients with decompensated (Child-Pugh B or C) cirrhosis (A1).
- Patients with decompensated (Child-Pugh B or C) cirrhosis, without HCC, awaiting liver transplantation with a MELD score <18-20 can be treated with sofosbuvir and ledipasvir genotypes 1, 4, 5 and 6), or with sofosbuvir and velpatasvir all genotypes), with daily weight-based ribavirin (1,000 or 1,200 mg in patients <75 kg or ≥75 kg, respectively) for 12 weeks (A1).
- In patients with decompensated (Child-Pugh B or C) cirrhosis without HCC awaiting liver transplantation with a
 MELD score <18-20 treated with sofosbuvir and ledipasvir with ribavirin, or with sofosbuvir and velpatasvir
 with ribavirin, ribavirin can be started at the dose of 600
 mg daily and the dose subsequently adjusted depending
 on tolerance (B1).
- Patients with decompensated (Child-Pugh B or C) cirrhosis with contraindications to the use of ribavirin or with poor tolerance to ribavirin on treatment should receive the fixed-dose combination of sofosbuvir and ledipasvir

- (genotypes 1, 4, 5 or 6), or the fixed-dose combination of sofosbuvir and velpatasvir (all genotypes), for 24 weeks without ribavirin (A1).
- The higher risk of adverse events reported in patients with decompensated cirrhosis awaiting liver transplantation necessitates appropriately frequent clinical and laboratory assessments during and after HCV therapy (B1).
- Patients with decompensated cirrhosis without HCC awaiting liver transplantation with a MELD score ≥18– 20 should be transplanted first, without antiviral treatment. HCV infection should be treated after liver transplantation (B1).
- Patients with decompensated cirrhosis without HCC awaiting liver transplantation with a MELD score ≥18– 20 can be treated before transplantation if the waiting time on the transplant list exceeds 6 months, depending on the local situation (B2).

- drugs not registered in the Russian Federation

Sofosbuvir

МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ.

минадрав россии

инструкция 38-003527 - 250316

СОГЛАСОВАНО

по медицинскому применению лекарственного препарата

СОВАЛЬЛИ

Регистрационный номер:

Торговое название: Совальди

Международное непатентованное наименование: софосбувир

Лекарственная форма: таблетки, покрытые пленочной оболочкой

COCTAB

1 таблетка содержит:

действующее вещество: софосбувир 400,0 мг;

встомогательные вещества:

Ядро таблетки:

маннитол 360,0 мг, целлюлоза микрокристаллическая 356,0 мг, кроскармеллоза натрия 60,0 мг, кремния диоксид коллоидный 6,0 мг, магния стеарат 18,0 мг;

Оболочка таблетки:

Опадрай II желтый 36,0 мг, содержащий: поливиниловый спирт (40,0%), титана диоксид (23,33%), макрогол (20,20%), тальк (14,8%), краситель железа оксид желтый (1,67%).

ОПИСАНИЕ

Капсулообразные таблетки, покрытые пленочной оболочкой желтого цвета, с гравировкой "GSI" на одной стороне и «7977» на другой.

ФАРМАКОТЕРАПЕВТИЧЕСКАЯ ГРУППА: противовирусное средство

Koa ATX: J05AX15.

ФАРМАКОЛОГИЧЕСКИЕ СВОЙСТВА

Фармакодинамика

ПРОТИВОПОКАЗАНИЯ

- Повышенная чувствительность к софосбувиру или любому другому компоненту препарата;
- Беременность;
- Детский возраст до 18 лет (эффективность и безопасность не установлена у данной популяции);
- Почечная недостаточность тяжелой степени тяжести (КК<30 мл/мин) или терминальная стадия почечной недостаточности, когда необходимо проведение гемодиализа (безопасность не установлена у данной популяции пациентов);
- Сочетанное инфицирование вирусами гепатита С и В (ВГС/ВГВ) (отсутствуют данные о применении препарата Совальди у данной популяции пациентов);
- Декомпенсированный цирроз печени (эффективность и безопасность не установлена у данной популяции пациентов);
- У пациентов, получающих мощные индукторы Р-гликопротеина (например, рифампицин, зверобой продырявленный [Hypericum perforatum], карбамазепин и фенитоин, фенобарбитал, окскарбазепин).

CONTRAINDICATIONS:

- ...
- ...
- •
- Decompensated cirrhosis (efficacy and safety not established in this patient population)
- •

Treatment of special groups

HBV coinfection

Recommendations

- Patients with HBV-HCV coinfection should be treated with the same anti-HCV regimens, following the same rules as HCV monoinfected patients (B1).
- Patients coinfected with HCV and HBV fulfilling the standard criteria for HBV treatment should receive nucleoside/nucleotide analogue treatment according to the EASL 2017 Clinical Practice Guidelines on the management of hepatitis B virus infection (A1).
- Patients who are HBs antigen-positive should receive nucleoside/nucleotide analogue prophylaxis at least until week 12 post anti-HCV therapy and be monitored monthly if HBV treatment is stopped (B1).
- In patients who are HBs antigen-negative but anti-HBc antibody-positive, serum ALT levels should be monitored monthly, HBs antigen and HBV DNA should be tested if ALT levels do not normalise or rise during or after anti-HCV therapy, and nucleoside/nucleotide analogue therapy should be initiated if HBs antigen and/or HBV DNA are present (B1).
- HBs antigen-negative, anti-HBc antibody-positive patients undergoing anti-HCV treatment should be monitored monthly for ALT and tested for HBs antigen and HBV DNA in case of ALT elevation (B1).

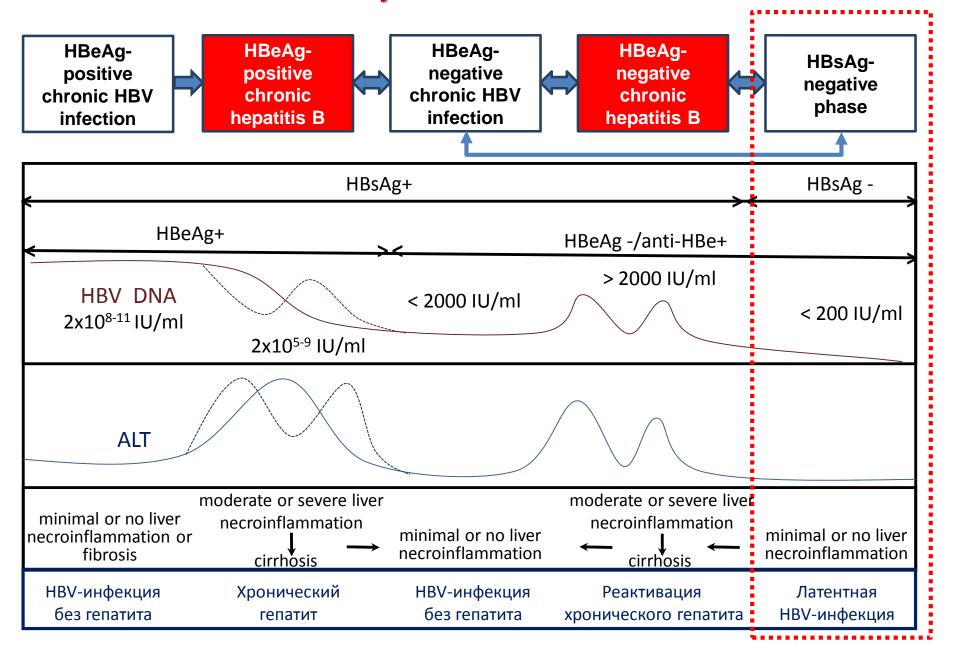
J Hepatol 2018; 69: 461-511

Occult hepatitis B virus infection

• **Definition:** Presence of HBV DNA in the liver (with detectable or undetectable HBV DNA in the serum) of individuals testing HBsAg negative by currently available assays.

When detectable, the amount of HBV DNA in the serum is usually very low (< 200 IU/ml)

Natural history of chronic HBV infection



Based on: EASL 2017 Clinical Practice Guidelines on the management of hepatitis B virus infection. J Hepatol 2017; 67: 370 –398.



Annals of Internal Medicine

Original Research

Hepatitis B Virus Reactivation Associated With Direct-Acting Antiviral Therapy for Chronic Hepatitis C Virus

A Review of Cases Reported to the U.S. Food and Drug Administration Adverse Event Reporting System

Susan J. Bersoff-Matcha, MD: Kelly Cao, PharmD: Mihaela Jason, PharmD: Adebola Ajao, PhD: S. Christopher Jones, PharmD, MS, MPH; Tamra Meyer, PhD, MPH; and Allen Brinker, MD, MS

Background: Direct-acting antiviral agents (DAAs) are used increasingly to treat hepatitis C virus (HCV) infection. Reports were published recently on hepatitis B virus (HBV) reactivation (HBV-R) in patients with HBV-HCV co-infection. Hepatitis B virus reactivation, defined as an abrupt increase in HBV replication in patients with inactive or resolved HBV infection, may result in dinically significant hepatitis.

Objective: To assess whether HBV-R is a safety concern in paents receiving HCV DAAs.

sign: Descriptive case series.

ing: U.S. Food and Drug Administration (FDA) Adverse Reporting System (FAERS).

ts: 29 patients with HBV-R receiving HCV DAAs.

ments: Clinical and laboratory data

he FDA identified 29 unique reports of HBV-R in paring DAAs from 22 November 2013 to 15 October isses resulted in death and 1 case in liver transplans in whom HBV-R developed were heterogeneous V genotype, DAAs received, and baseline HBV baseline, 9 patients had a detectable HBV viral

load, 7 had positive results on hepatitis B surface antigen (HBsAg) testing and had an undetectable HBV viral load, and 3 had negative results on HBsAg testing and had an undetectable. HBV viral load. For the remaining 10 patients, data points were not reported or the data were uninterpretable. Despite provider knowledge of baseline HBV, HBV-R diagnosis and treatment. were delayed in 7 cases and possibly 7 others.

Limitations: The quality of information varied among reports. Because reporting is voluntary, HBV-R associated with DAAs likely is underreported.

Conclusion: Hepatitis B virus reactivation is a newly identified safety concern in patients with HBV-HCV co-intection treated with DAAs. Patients with a history of HBV require dinical monitoring while receiving DAA therapy. Studies would help determine the risk factors for HBV-R, define monitoring frequency, and identify patients who may benefit from HBV prophylaxis and treatment. DAAs remain a sale and highly effective treatment for the management of HCV infection.

Primary Funding Source: None.

doi:10.7326M17-0377 Annais.org For author affiliations, see end of text.

6% of U.S. adults with HBV infection become chroni-

cally infected (11). An estimated 850 000 to 2.2 million

persons in the United States have chronic HBV infec-

tion, and an additional 5000 to 8000 become chroni-

cally infected each year (11). Worldwide, HBV is a major

cause of liver disease, ranging from acute to chronic

of HBV-HCV co-infection, it is common in geographic

areas where both infections are endemic and in popu-

lations at high risk for both viruses because of their

common routes of transmission (12, 13). The preva-

lence of HBV co-infection in 2 U.S. Veterans Affairs pa-

tient cohorts with chronic HCV infection was as high as

an abrupt increase in HBV replication in a patient with

inactive or resolved HBV infection (18). Although HBV-R

Hepatitis B virus reactivation (HBV-R) is defined as

Although estimates vary regarding the prevalence

hepatitis, cirrhosis, and hepatocellular carcinoma.

This article was published at Annals.org on 25 April 2017.

170 million persons worldwide have rus (HCV) infection (1), including 2.7 in the United States (2). The infecnic in about 75% to 85% of HCVronic HCV infection results in se-10% to 20% of patients and is the hosis, hepatocellular carcinoma. n in the United States. Approxidie each year of HCV-related d States (3). satment regimens were cum-

arse drug effects, and only tients had a sustained virodefined as the absence of grum 12 weeks after comailability of newer directfor HCV, patients now hieving SVR (7, 8), with logic response is assoin all-cause and liver-related Lettular carcinoma, and hepatic de-

in the United States, acute hepatitis B virus (HBV) infection occurs primarily among injection drug users and men who have sex with men. Approximately 2% to

may occur spontaneously, it is more frequent in patients with immunodeficiency due to HIV (19), autoim-

42% to 67% (14-17).

See also:

Annals of Internal Medicine



Simplified treatment of chronic hepatitis C with pangenotypic drug regimens in patients without cirrhosis and in patients with compensated (Child-Pugh A) cirrhosis

- If cirrhosis can be reliably excluded by means of a noninvasive marker in treatment-naïve patients, the combination of glecaprevir and pibrentasvir can be administered for 8 weeks only (A1).
- Generic drugs can be used, provided that quality controls are met and guaranteed by the provider (A1).
- Possible drug-drug interactions should be carefully checked and dose modifications implemented when necessary (A1).
- Given the high SVR12 rates expected with these regimens across all groups of patients if adherent, checking SVR12 12 weeks after the end of treatment is dispensable (B1).
- Patients with high-risk behaviours and risk of reinfection should be tested for SVR12 and yearly thereafter whenever possible (B1).
- In patients with advanced fibrosis (F3) or compensated cirrhosis (F4), post-SVR surveillance for the diagnosis of HCC and linkage to care must be provided when treatment for HCC is available (A1).

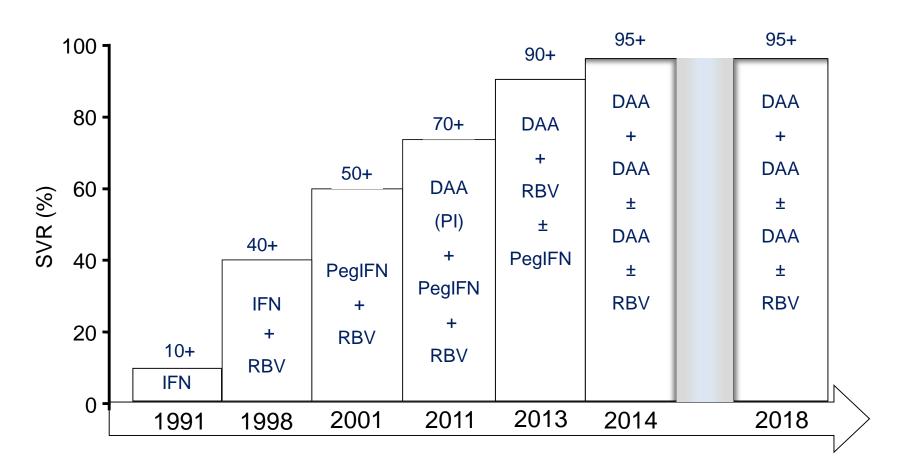
Учитывая высокие показатели УВО12, ожидаемые при этих режимах во всех группах пациентов, если они привержены лечению, проверка УВО через 12 недель после окончания лечения необязательна

Recommendations

- A sensitive molecular method with a lower limit of detection ≤15 IU/ml should be used to monitor HCV RNA levels in serum or plasma (A1).
- In low- or middle-income countries and in specific settings in high-income countries, a qualitative HCV RNA assay with a lower limit of detection ≤1,000 IU/ml (3.0 Log₁₀ IU/ml) can be used to provide broad affordable access to HCV diagnosis and care (B1).
- Measurement of HCV core antigen levels in serum or plasma by EIA can be used as an alternative to HCV RNA level measurement to monitor treatment efficacy when HCV RNA assays are not available and/or not affordable (A1).
- In patients treated with an IFN-free regimen, HCV RNA or HCV core antigen levels should be measured at baseline and 12 or 24 weeks after the end of therapy (to assess SVR12 or SVR24, respectively) (A1).
- In some parts of the world, given the high SVR12 rates expected with DAA-based regimens, checking SVR may be dispensable, except in patients with high-risk behaviours and risk of reinfection (B2).

В некоторых частях мира, учитывая высокие показатели УВО12 при использовании схем на основе ПППД, проверка УВО необязательна, за исключением пациентов с рискованным поведением и риском реинфекции

Treatment of HCV Infection



IFN, interferon-α; PegIFN, peginterferon-α; RBV, ribavirin; DAA, direct-acting antiviral; PI, protease inhibitors; SVR, sustained virological response

Conclusion

- Russian specificity impacts on the use of EASL Recommendations on Treatment of Hepatitis C in real clinical practice
- Российская специфика накладывает отпечаток на использование рекомендаций EASL по лечению гепатита С в реальной клинической практике
- Only serious work on harmonization of domestic standards with the best international ones will allow to solve the problem of controlling HCV infection in Russia
- Только серьезная работа по приведению в соответствие отечественных стандартов с лучшими международными образцами позволит приблизится к решению задачи по контролю над HCV-инфекцией в России