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THE EFFECT OF VARIOUS HEPATOPROTECTORS ON PATHOLOGICAL SYNDROMES IN CHRONIC LIVER DISEASES AND DETERMINATION OF THE SPECIFIC GRAVITY OF DRUG GROUPS

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ANNOTATION
Chronic hepatitis, cirrhosis of the liver and their consequences remain a global medical and social problem in the world. In the clinical practice of previous years, a variety of drugs were used as means of pathogenetic therapy, many of which turned out to be ineffective and went out of use. At the same time, widely known data on the ability of liver tissue to regenerate allow a rather high assessment of the prospects and potential possibilities of pathogenetic therapy of chronic hepatitis and cirrhosis using hepatoprotectors.[1,2,5] Drug therapy for patients with liver pathology should always be as economical as possible. In each case, it is necessary to compare the degree of necessity of prescribing the drug and the potential danger of its side effects. In the treatment of patients with liver diseases, polypharmacy is extremely undesirable, and the prescribed doses, as a rule, should not exceed the average therapeutic and course.[9,14,19]

KEYWORDS: Chronic hepatitis, cirrhosis, hepatoprotector, cholestasis, cytolytic syndrome.

Relevance of the problem

Despite the improvement of preventive, therapeutic and diagnostic methods, liver diseases continue to be a frequent cause of complications and deaths. In recent years, a number of international and national recommendations have been published aimed at optimizing the pharmacotherapy of liver diseases. However, in practice there are significant differences between the pharmacotherapy of liver diseases practiced in real clinical conditions and existing standards. This dictates the need for pharmacoepidemiological studies aimed at obtaining data on the real practice of using drugs for liver diseases, and especially by doctors from rural medical centers, which patients usually turn to.

Drug therapy for patients with liver pathology should always be as economical as possible. In each case, it is necessary to compare the degree of necessity of prescribing the drug and the potential danger of its side effects. In the treatment of patients with liver diseases, polypharmacy is extremely undesirable, and the prescribed doses, as a rule, should not exceed the average therapeutic and course.

Management of patients with chronic liver diseases (CHLD) requires significant material costs - this is not only payment for treatment, but also indirect costs associated with temporary and permanent disability of the patient. This fact necessitates the use by doctors of modern and effective methods for the diagnosis of prevention and ChLD.

Today, not one new treatment for CHLD can be adopted unless it has been proven to have a positive effect on patient survival. This method of evaluating the effectiveness and safety of the drugs used and the method of treatment is called "evidence-based medicine. A number of requirements are presented to the pharmacotherapy of ChLD: it must be based on the results of evidence-based medicine, be combined, carried out in small doses of drugs and lead to an improvement in the quality of life of the patient.

Based on the foregoing, pharmaco-epidemiological studies play an important role in understanding the problems associated with the introduction of patients with CHLD. The lack of independent epidemiological studies of CHLD in Uzbekistan does not allow us to fully talk about the detailed characteristics of patients with CHLD, the methods of diagnosis used, the nature and results of their treatment. In the analysis of the work carried out in the regions of the Republic of Uzbekistan, a number of problems were identified related to the introduction of CHLD: insufficient diagnosis of this disease, different approaches to their treatment of the disease, different doses and frequency of use of drugs,

lack of sufficient control over the dynamics of treatment, polyprogramming, non-identification and lack of correction of risk factors and associated pathologies. The above does not allow us to draw final conclusions about the situation with the introduction of patients with CHLD in the regions of the republic and especially in the Bukhara and Navoi regions.

The above stated testifies to the relevance of conducting focused research on the use of hepatotropic drugs in real medical practice, the results of which allow not only to assess the adequacy of the diagnosis and therapeutic measures performed in patients with CHLD, but also to make adjustments to the algorithm for administering patients with this pathology and to maintain the gap between everyday clinical practice and achievements of medical science.

From the foregoing, it becomes apparent that chronic hepatitis C is a disease requiring a long and expensive treatment and therefore the study of pharmacoeconomics in these patients is very promising.

We previously studied the structure and frequency of drugs used for the treatment of chronic hepatitis C.[17] The results of these studies required research and the study of pharmacoeconomic aspects of the treatment of this disease.

The aim of this work was to study and analyze the costs of treatment of chronic hepatitis C in hospital.

MATERIALS AND RESEARCH METHODS

A retrospective study was performed at the Bukhara Regional Multidisciplinary Medical Center, a department of gastroenterologists in the period from 2015-2019 with CHLD diseases. Bukhara region analyzed 5000 case histories (CHLD) of which 1167 (ChH) were subjected to in-depth study.

The subject of the study was the drugs used to treat this disease. The cost of acquiring the used medicines was calculated taking into account the average market value of the drug corresponding to the hospitalization of the patient period and the average length of hospital stay. The obtained results were processed by the method of variation statistics.

In connection with the above, we separately studied the structure and costs of individual drugs of first-line drug groups for the treatment of chronic hepatitis C. First of all, hepatoprotective drugs were analyzed. The results of this analysis are presented in table 1.

Table 1: Costs of hepatoprotectors used to treat chronic hepatitis C.

№	Types of Medicines	unit of measurement	Price	Destination quantity	Amount	Percentage ratio
1	Essential 5 ml (№5 in a box)	№5 in a box	26626	236	6288522	26%
2	Carsil tab. (№80 in a box)	№80 in a box	24590	226	5562918	23%
3	Ursosan cap. (№50 in a box)	№50 in a box	62500	88	5538731	22.9%
4	Hepa-mertz 10мл (№10 in a box)	№10 in a box	105000	40	4208468	17.4%
5	Heptral-400мг (№5 in a box)	№5 in a box	150000	10	1523755	6.3%
6	Liv-52 (№100 in a box)	№100 in a box	6200	78	483732	2%
7	Apcosul (№100 in a box)	№100 in a box	4658	62	290239	1.2%
8	Seripar 5мл (№1 in a box)	№1 in a box	9316	31	290239	1.2%

As can be seen from the data presented, 8 representatives of hepatoprotectors were mainly used for the treatment of chronic hepatitis C. At the same time, the essential drug was Essentiale, Karsil, Ursosan, the “gold standard” in the treatment of the pathology under study. Which accounted for 72.0% of the funds for the purchase of hepatoprotectors. Apcosul and seripar turned out to be less expensive, which amounted to 1.2% of the spent.

The cost of hepatoprotectors used to treat chronic hepatitis C (in 24186604 thousand soums) funds. At the same time, only 28% of the funds for the purchase of hepatoprotectors were spent on the rest of the drugs (hepomerts, heptral, liv-52, apcosul.) Therefore, from the group of hepatoprotectors, the most expensive is the essence, for which 4/1 of the funds were spent. At the same time, it is required to find out if the costs of this group of drugs are consistent with the needs of hospitalized patients. If we take into account that, as a rule, for the treatment of one patient with chronic hepatitis C, ursosan capsules are prescribed in doses from 10 mg to 18 mg[14], depending on the severity of the pathological process, then in our case 16800 capsules (250 mg each) of ursosan were needed. To purchase this amount of the drug was required 22154924sum. However, according to our analysis, over the course of the year, 4400 capsules (250 mg each) of ursosan in the amount of 5538731 thousand soums were used, which is only 22.9% of the required cost for this drug. Apparently, these results are not due to the low availability of patients with this drug, but rather the presence of contraindications for use, the risk of complications, as well as with comorbid conditions. It should be noted that the essence was used in injection form, the cost of which amounted to 628852sum. This fact also affects the provision of patients with this drug. However, even when summarizing the costs of the injectable and encapsulated form of the essence, despite the increase in purchase costs, the minimum proper need of patients for this drug is not covered. According to our

data, patients with chronic hepatitis C also received hepatamerz, heptral, liv-52, apkasul, the costs of which accounted for ¼ of the cost of hepatoprotectors. Given that the vast majority of patients with chronic hepatitis C had a severity of the course of the disease, it becomes clear the need for the combined use of two or more hepatoprotectors.[14]

In the structure of hepatoprotectors for oral administration, 4 drugs turned out to be costly: karsil, ursosan, hepamerts, liv-52 and apkosul (Fig. 6). Karsil and ursosan accounted for 55.9% of the cost of purchasing hepatoprotectors for oral administration. Moreover, among these two drugs were the costs of which amounted to almost half the costs of these 4 drugs. Therefore, in the structure of treatment of patients with chronic hepatitis C from hepatoprotectors for ingestion, more funds were spent on the purchase of drugs with selective action on liver cells and on hepatoprotectors with less pronounced side effects.

Table 2: Costs of hepatoprotectors, used (per os) for the treatment of chronic hepatitis C (11875620 in thousand soums.

№	Types of Medicines	unit of measurement	Price	Destination quantity	Amount	Percentage ratio
1	Carsil tab. (№80 in a box)	№80 in a box	24590	226	5562918	23%
2	Ursosan cap. (№50 in a box)	№50 in a box	62500	88	5538731	22.9%
3	Liv-52 (№100 in a box)	№100 in a box	6200	78	483732	2%
4	Apcosul (№100 in a box)	№100 in a box	4658	62	290239	1.2%

The total number of hepatoprotectors used in patients with chronic hepatitis C during the year, regardless of their route of administration, is 1785 injectable form, 454 box of tablet form. Taking into account the probability of a combination of enteric and parenteral routes of administration of drugs and an increase in the frequency of their intake per day up to 3 times, we separately calculated the coverage of the needs of patients with chronic hepatitis for hepatoprotectors. At the same time, it was found that the number of hepatoprotectors we identified provides the need for 292 patients with chronic hepatitis C. Therefore, the cost of acquiring hepatoprotective, regardless of their dosage forms and trade names, theoretically allows you to fully ensure the need for the analyzed patients with chronic hepatitis C for drugs from the group of hepatoprotectors. However, it should be borne in mind that not all hepatoprotectors used are effective and safe for the body in our case, which requires preliminary differentiation of the hepatoprotectors used, taking into account both the peculiarities of the pathology and the organism of patients with chronic hepatitis C. Indeed, the importance of hepatoprotector in the treatment of chronic hepatitis C has significantly decreased in recent years due to the advent of new effective pathogenetic therapy regimens.[15] Hepatoprotectors in chronic hepatitis C are mainly used as pathogenetic therapy and their action is aimed at restoring liver function and reducing the severity of disease symptoms.

CONCLUSIONS

Among the hepatoprotectors prescribed for CHLD in 2015-2019, more than half were drugs containing essential phospholipids, which had a better effect on the clinical course of chronic hepatitis of non-viral etiology in the form of a decrease in the number of exacerbations and transition to liver cirrhosis.

Pharmacoeconomic analysis of drugs used to treat CHLD showed that in 2015-2019, the structure of the most expendable drugs (group A) did not show enough for both etiotropic and pathogenetic therapy, minor infusion and metabolic drugs prevailed in it.

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