ABSTRACT
Importance: Treatment of hepatocellular carcinoma remains a topical issue of Clinical Oncology. More than 80% of cases hepatocellular carcinoma develops in the presence of liver cirrhosis. These patients are doomed, many clinics they held only symptomatic treatment and life expectancy of patients is not more than 6 months. The main reason for the refusal of surgeons and Chemotherapeutists of treatment is associated cirrhosis.

Purpose: To improve results of surgical treatment of liver cancer developed on cirrhosis

Materials and methods: We analyzed the immediate results of treatment of 12 patients with hepatocellular carcinoma developed on a background of liver cirrhosis. From - the large size of the tumor and associated liver cirrhosis, these patients the first stage of oil produced by hepatic artery chemoembolization of the affected lobe of the liver tumor. After 2 - 3 weeks performed liver resection.

Results: After analyzing the results, we concluded: chemoembolization reduces tumor volume and weight, increases the physiological regeneration of hepatocytes unaffected tumor fraction, improves functional performance of the liver and does not affect the frequency and severity of postoperative complications.

UDC CODE & KEYWORDS
- 616.096 - HEPATOCELLULAR CARCINOMA - OIL CHEMEOEMBOLIZATION OF THE HEPATIC ARTERY - LIVER RESESECTION - LIVER CIRRHOSIS

INTRODUCTION
The steady increase in the incidence of hepatocellular carcinoma (HCC) all over the world, which accounts for 58-90% of primary tumors of the liver, is making this disease an urgent socio-medical problem [1,4,5,6,7,15]. HCC takes the fifth place in spreading, and third in mortality among all malignant neoplasms in the world [6, 13]. Men are affected 2-3 times more than women [1,6,7,9]. According to the report of the Ministry of Health Cancer Research Center of Uzbekistan, there were 850 patients registered with primary liver cancer in 2005, in Uzbekistan. The incidence resulted among men 4.8 and women 2.0 per 100,000 population [3].

In this regard, the task of choosing the optimal treatment for patients with HCC becomes of particular relevance. The experience of systemic chemotherapy treatment convinces that, its best results can be expected in patients with HCC without background cirrhosis and in patients who have normal levels of bilirubin in blood. In cases of viral hepatitis reactivation, in its chronic course or cirrhotic changes in liver, the use of even low doses of chemotherapy can lead to a sharp deterioration of the patients’ condition [11,19].

Up to date, the only radical treatment of HCC is a surgical resection of the organ. But the diagnosis “liver cirrhosis” keeps surgeons from this type of intervention due to the extremely high risk of postoperative functional failure of the affected with cirrhosis remaining liver volume (Future remnant liver = FRL) [8]. It is known that the resection is relatively safe, provided, that the volume of FRL is no less than 30% of normal functioning liver and no less than 40% - if it is affected [8]. The radical treatment of HCC is possible only in 10-25% of all cases due to either failing liver function or due to existence of extrahepatic metastases. Postoperative mortality is less than 3% in patients without cirrhosis and 7-25% - in patients with liver cirrhosis. When treating patients with cirrhosis, the preference is given to limited segmental or wedge resections. The residual capacity of the liver is considered to be sufficient for resection in cirrhosis of class A by Child-Pugh. Resection is contraindicated in patients with cirrhosis of class C in Child-Pugh score, due to high operative risk and short life expectancies [11,17,19,20]. In case of unresectable process, the prognosis is poor and survivability makes only a few months. In recent years we may see different methods of preoperative chemoembolization, embolization of the hepatic artery and portal veins applied with the purpose of improvement of survivability rate. Intraarterial chemoembolization is effective in 16-55% of cases. This type of therapy can lead to a decrease in tumor volume and to a significant increase in life expectancy of patients with HCC [2,12,14,15].

In this context, the aim of our study was to improve the results of combined treatment of primary liver cancer that developed on the background of cirrhosis by applying a pre-hepatic artery chemoembolization followed by surgical intervention.

MATERIALS AND METHODS
The results of diagnostics and treatment of 12 patients with primary HCC at stage T2-3N0-1M0 and which developed on the background of cirrhosis were analyzed. Patients were those, treated in the department of Abdominal Surgery of RCRC, MH of Uzbekistan from 2007 to 2009. In the preoperative stage, all the patients underwent to chemoembolization of hepatic artery on the affected by tumor lobe. Chemoembolization was done by using an oil suspension of chemotherapeutic drug Doxorubicin OD 60-80 mg with Yodolipole 5-10 ml, followed by the...
introduction of Gianturko’s spiral. Patients were in the age of 25 to 62 years, 8 men (66.7%), 4 women (33.3%). The following methods were used with the purpose of diagnosing and clarifying the extent of process, and for clarifying concurrent liver disease: ultrasonography of the liver with Doppler to identify the degree of vascularization of the tumor; chest x-ray, radiological and endoscopic examinations of the gastrointestinal tract; computed tomography to determine the localization and tumor volume; diagnostic laparoscopy with biopsy; angiography; radionuclide techniques; determination of AFP, and biochemical studies. The diagnosis of HCC and cirrhosis in all cases was verified by puncture biopsy which was performed as under ultrasound supervision, as well as taken during laparoscopic study. The material was sampled from the tumor and the cirrhotic site.

All patients had concomitant cirrhosis, which was clinically classified as being Class A on Child-Pugh. Liver cirrhosis in this classification is classified by 5 parameters: serum bilirubin, serum albumin, ascites, neurological disorders (encephalopathy) and prothrombin index, according to three degrees of clinical compensation (the scale of Child-Turcotte-Pugh) A, B and C. To study the degree of tumor vascularization UZDG and angiography were used, while in 9 (75.0%) patients were diagnosed with hyper-vascularized, and in 3 (25.0%) - moderately vascularized tumors.

In 2 (16.7%) patients, tumor size ranged from 6 to 8 cm in greatest dimension, in 4 (33.3%) - from 8 to 10 cm, in 5 (41.7%) - from 10 to 12 cm, and 1 (8.3%) patients - more than 12 cm

Almost all patients are determined to the objective parameters and functional status of liver was carried out dynamic scintigraphy. For this purpose, patients were intravenously injected radiopharmaceutical 99 m Tc Brom «MESIDA» the activity of 5 mKu. The process of accumulation and excretion of the radiopharmaceutical in the hepatobiliary system was dependent both on the functional state of hepatocytes and biliary tract, and on the arrival rate of the radiopharmaceutical in the bloodstream to the liver.

Study of biochemical parameters in examined patients showed that the serum bilirubin, as conjugated and unconjugated fractions was elevated in 8 (66.7%) patients in the remaining patients its level did not exceed the upper limit of normal.

In 11 (91.7%) patients, albumin levels were moderately reduced to 24 g / l, while in 10 (83.3%) patients showed a trend to an increase in β-globulins and a marked increase in γ-globulins. As we know, this layout protein fractions indicates the presence of cirrhosis. In 2 (16.7%) patients showed a trend toward lower concentrations of urea. Immunohistochemical tests of blood serum, which differ in the diagnostic and prognostic importance, were performed in all patients. As it is well known that rise in blood levels of AFP may indicate as HCC, and of liver cirrhosis. As shown by the analysis of AFP, all patients had 2-5-fold increase in this indicator.

During endoscopic examination in all patients revealed varicose veins of the lower third of the esophagus and proximal stomach.

In 9 (75.0%) patients, chemoembolization performed with the defeat of the right lobe of the liver tumor and 3 patients (25.0%) - the defeat of the left lobe. The main objectives of the use of chemoembolization were: reduction in tumor volume, both due to the direct therapeutic effect of chemotheraphy, because due to the cessation of blood flow and arterial blood flow diversion from the affected zone of the tumor in cirrhotic opposite lobe of the liver, which would enhance the physiological regeneration of liver cells.

RESULTS

We have not seen any complications related to the method of chemoembolization. Postembolization syndrome (EDS) was observed in 5. (41.7%) patients in the first three days after the procedure.I degree in 4 (33.3%) patients TEC II degree and 3 patients (25.0%) patients with EDS III degree which was accompanied by the appearance of moderate pain in the right hypochondrium and fever, these phenomena are successfully corrected by conservative means.

Control studies carried out in two weeks after chemoembolization showed that the physiological increase of 1 to 3 cm unaffected lobe of the liver with improved functional parameters were observed in almost all 12 patients. In 8 (66.7%) patients had normal levels of bilirubin in the remaining 4 (33.3%) patients, along with bilirubin, came back to normal rates of albumin and urea.

Obtained very interesting and compelling data on the AFP after 2-3 weeks after chemoembolization: so in 4 (33.3%) patients with AFP levels decreased to borderline values in 6 (50.0%) patients had marked decrease in its level to normal values that can serve as a criterion of treatment success of treatment.

Partial antitumor effect was registered in 8 patients (88.9%) with hyper-vascularized tumors and 2 patients (6.7%) with moderate vascularization of the tumor. Stabilization of the tumor was achieved in 1 (11.1%) patient with hyper-vascularized tumor, and in 1 (33.3%) patient with moderately vascularized tumor.

All the patients 2-3 weeks after chemoembolization was carried out surgery in the volume of the right-and left-sided hemihepatectomy. In the postoperative period in 5 patients (41.7%) developed complications of all kinds. So, liver failure began to develop 4 of them for 3-4 days, there was right-sided pleural effusion in 3 patients. There was zhelcheistechenie in 1 patient and subdiaphragmatic abscess in 1 patient. All complications were eliminated by conservative measures. Lethality was not observed.

CONCLUSION

1. The use of chemoembolization in the preoperative stage in hepatocellular carcinoma which developed on the background of cirrhosis, leads to a decrease in volume and tumor mass, normalization of biochemical parameters and the level of AFP, as well as to improve the functional parameters of the unaffected lobe of the liver tumor.

2. The use of chemoembolization in the preoperative stage does not affect on the frequency and severity of postoperative complications and prevent the risk of developing liver failure.

3. Study of Vascular architectonics of primary malignant tumors of the liver is important in determining treatment prognosis. Higher antitumor effect was observed in patients with hyper-vascularized tumors in comparison to moderately vascularized.

4. Nature of postoperative complications that occurred in 5 (41.7%) patients depended not only on the volume of resection, but also on the degree of cirrhotic liver. In most cases, complications were specific and were eliminated by conservative measures.

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