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Primary liver cancer: a clinical case

Relevance: Primary liver cancer is a common malignant neoplasm. According to the official statistics of the Republic of Kazakhstan, in 2016 liver cancer ranked 14th in the structure of oncological morbidity republic-wide, and 9th in Kyzylorda region. The incidence of primary liver cancer in the Republic of Kazakhstan was 4.9‰. The incidence in Kyzylorda region (7.4‰) was 1.5 times higher than the national figures.

Among malignant tumors, primary liver cancer is a severe organ disease, and the choice of its treatment method is challenging. A radical method is surgery though most of the patients cannot stand anatomical resection of the liver. The average life expectancy after radical surgery is 22.6 months.

The article provides the results of a clinical case of liver cancer after radical surgical treatment.

Results: In the subscribed case, surgical treatment of primary liver cancer stage III with germination in the right kidney has allowed to stabilize the patient's condition and to achieve almost 10 years of survival with a tendency of further improvement.

Conclusion: Early liver cancer can be cured by radical surgical treatment.

Keywords: liver cancer, cirrhosis, surgical treatment.

Introduction. Liver cancer is a severe malignant pathology [1]. Its development is especially influenced by chronic viral hepatitis B, C, D and alcohol abuse. Rare etiological factors include oral contraceptives, radiopaque substances, mycotoxins, i.e. aflatoxins found in food products. Malignancy occurs when liver cirrhosis reaches 80%. Hepatocellular liver cancer ranks 8th worldwide in frequency. Primary liver cancer accounts for 80-90% of all malignant tumors. The incidence of hepatocellular liver cancer in young people is growing [2]. In the Republic of Kazakhstan, in 2016, liver cancer ranked 14th in incidence in both sexes, 10th in men, and 15th in women. Per 100 000 of primary cancer cases, liver cancer accounted for 5.9% in men vs. 4.0% in women. That means liver cancer incidence in men is 1.5 times more often than in women [3].

The treatment of primary liver cancer is a complex issue. Surgery mortality accounts for 18.3-22.8%. Life expectancy after final surgery is 22.6 months [1].

Materials. The presented clinical case demonstrates good results after combined final surgery for liver cancer.

Patient data.

Patient A., born in 1962 (case history No. 747), was admitted to the surgical department of Kyzylorda Cancer Center on March 26, 2009. Patient A., 47 year old, complained of pain in the right rib, overall weakness, weight loss in the last 2-3 months by 9-10 kg, and the loss of appetite. The patient could not associate the disease with any other conditions from his medical history.

Anamnesis Vitae: no infectious hepatitis, no tuberculosis. No injuries. No drug allergy. No transfusion of blood or its components in the past.

Clinical manifestations.

Overall condition at admission: moderate severe. The skin and mucous membranes – pale. Peripheral lymphatic glands – not enlarged. The abdominal cavity – soft, nor-

mal movement in breathing, in palpation – pain in the right hypochondria. The liver under the right ribs is enlarged by 6-7 cm, rugose and hard under the hand at palpation. Vesicular pulmonary respiration, respiratory rate – 17 per minute. Heart rhythm – normal. Blood pressure – 110/70 mm Hg. Pulse – 72 bpm. The large and small defecation – normal.

Diagnostics. Complete blood count at admission (March 27, 2009): White blood cells – 8.9x10⁹/L; Erythrocytes – 3.3 x10¹²/L; Hemoglobin – 87.00 g/L; Platelet count – 0.91; Lymphocytes – 18.08%; Monocytes – 11.51%; Eosinophils - 4.95%; Basophils - 0.66%; Neutrophils - 64.8%;

Urinalysis: Amount (ml) – 10.00; color – yellowish; specific gravity – 1012; pH – 6.5; epithelium – 3-4; protein – 0.099; sugar – not found.

Biochemical analysis: Total protein – 85.10 mmol/L; Urea – 5.70 mmol/L; Glucose – 3.96 mmol/L; ALT (Alanine aminotransferase) – 0.48 IU/L; AST (Aspartate Aminotransferase) – 117.40 IU/L; Total bilirubin – 19.5 mmol/L;

Coagulation profile: PTI – 83%, APTT – 58.9, Fibrinogen – 3.2 g/L, Creatinine – 72 µmol/L;

Electrolytes: calcium – 1.02/L, potassium – 4.3 mmol/L, sodium – 140 mmol/L. IFA (March 27, 2009): Hepatitis B and C – negative. Oncological markers: CEA – 2.68 IU/ml, CA19-9 – 58.63 IU/ml, AFP – 1017 ng/L. Ultrasound examination (March 26, 2009): The formation in liver. nephrophtosis (degree 1). Gastrofibroscopy (March 27, 2009) – no pathologies. Chest radiography (March 30, 2009) – normal. CT (February 02, 2009): the formation in the dextral part of the liver.

Before surgery, the patient received hepatoprotectors and vitamins IV, single infusions of saline and other liquids to support the balance of red cell mass and acid bases.

Clinical diagnosis: malignant hepatoma extended into the right kidney, ST III, T3N0M0. Moderate anemia.

Treatment: Thomas Starzl laparotomy was conducted on April 08, 2009 by Professor B.B. Baimakhanov. The size of tumor in the dextral liver side – 15.0x15.0 cm. The tumor has penetrated the kidneys. The conducted nephrectomy included an extended rightward hemihepatectomy and adrenal glandectomy. External drainages were established on the choledochal duct, under the dextral diaphragm, and on the ventricle by Pikovsky method.

The patient was admitted in serious condition to the intensive care unit where he received the relevant antibacterial and infusion therapy, vitamins, 5 infusions of red cell mass, 9 infusions of fresh plasma, protein preparations, hepatoprotectors.

Complete blood count (April 30, 2009): White blood cells – 7.9x10⁹/L; Erythrocytes – 3.5x10¹²/L; Hemoglobin – 108.00 g/L; Platelet count – 0.91; Lymphocytes – 18%; Monocytes – 11.51%; ESR – 52 h/mm.

Urinalysis: Amount (ml) – 10.00; color – yellowish; specific gravity – 1005; pH – 6.5; epithelium – 2-4; protein – 0.115, sugar – not found, erythrocytes – 3-4.

Ultrasound examination (April 14, 2009): diffusive changes in the left side of the liver. AFP – 5.87 ng/L (August 11, 2009). Splenomegaly. Limited ascites.

Histology results No.679: hepatocellular carcinoma, with metastases to the outer kidneys operculum.

On May 04, 2009, the patient was discharged in satisfactory state for outpatient follow-up at the place of residence.

The patient remained under constant follow-up control. Ultrasound examination (August 11, 2015): the state after liver resection. Diffusive changes in the left side of the liver. The liver volume has returned to the previous

normal level. Chronic pyelonephritis of the left kidney. Hydrocalycosis. AFP – 2.89 ng/L (August 11, 2015).

In November 2018, the patient was examined out patiently. No complaints. Weight gain of 12 kg. Overall condition – satisfactory.

Results. The results of final combined surgery were assessed in connection with the recovery of a person suffering from liver cancer. In spite of Stage III of the disease and kidney penetration, the conducted combined surgery gave good results, having improved the patient's quality of life.

Discussion. In spite of high post-operative mortality reported in the medical literature (average life expectancy – 22.6 months), in the described case the patient has lived for about 10 years after surgery and shows the possibility of continuing life in the future.

Conclusions. This clinical case shows the possibility of complete recovery of a patient in case of a timely surgery conducted at an early stage of primary liver cancer.

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