

Spontaneous ruptured hepatocellular carcinom

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Introduction

Heptocellular carcinoma is the most common type that primarily originates in the liver, and arises from malignant hepatocytes. The highest incidence is in areas of Southeast Asia and some areas of Africa, which are areas where hepatitis B infection is endemic, it also occurs in people with cirrhosis of the liver. Ruptured hepatocellular carcinoma is considered rare and is a life-threatening condition. The most common symptom of spontaneously ruptured hepatocellular carcinoma is abdominal pain. The incidence of spontaneously ruptured hepatocellular carcinoma in Western countries is less than 3%. While the incidence in Asia and Africa is much higher and ranges from 6% to 25% (1).

Case report

An eighty-nine-year-old patient hospitalized in the Clinic for General and Abdominal Surgery of the UKC RS for elective surgical treatment of a liver tumor localized in the left lobe of the liver. The patient was completely preoperatively processed and examined by an anesthesiologist. On the first day of hospitalization, basic laboratory tests were performed, where a drop in the hemogram was recorded in the laboratory tests: Er: 3.2 (1e12)/L; and Hgb: 99 g/L, other laboratory findings within reference values, normotensive patient 110/80 mmHg. Included chronic therapy (antihypertensives, oral antidiabetics), crystalloids fluids, proton pump inhibitors and vitamin K. On the second day of hospitalization, he was also normotensive at 140/60 mmHg, preoperative bowel preparation was performed, laxatives were included (portalak syrup), and a rectal enema was prescribed. On the third day of hospitalization, an operation was planned, the patient was put under general endotracheal anesthesia, and a medial laparotomy was performed, and an exploration revealed a full abdomen of blood, and a bleeding tumor of the left liver of approximately 15 cm was recorded, occupying the entire left lobe of the liver.

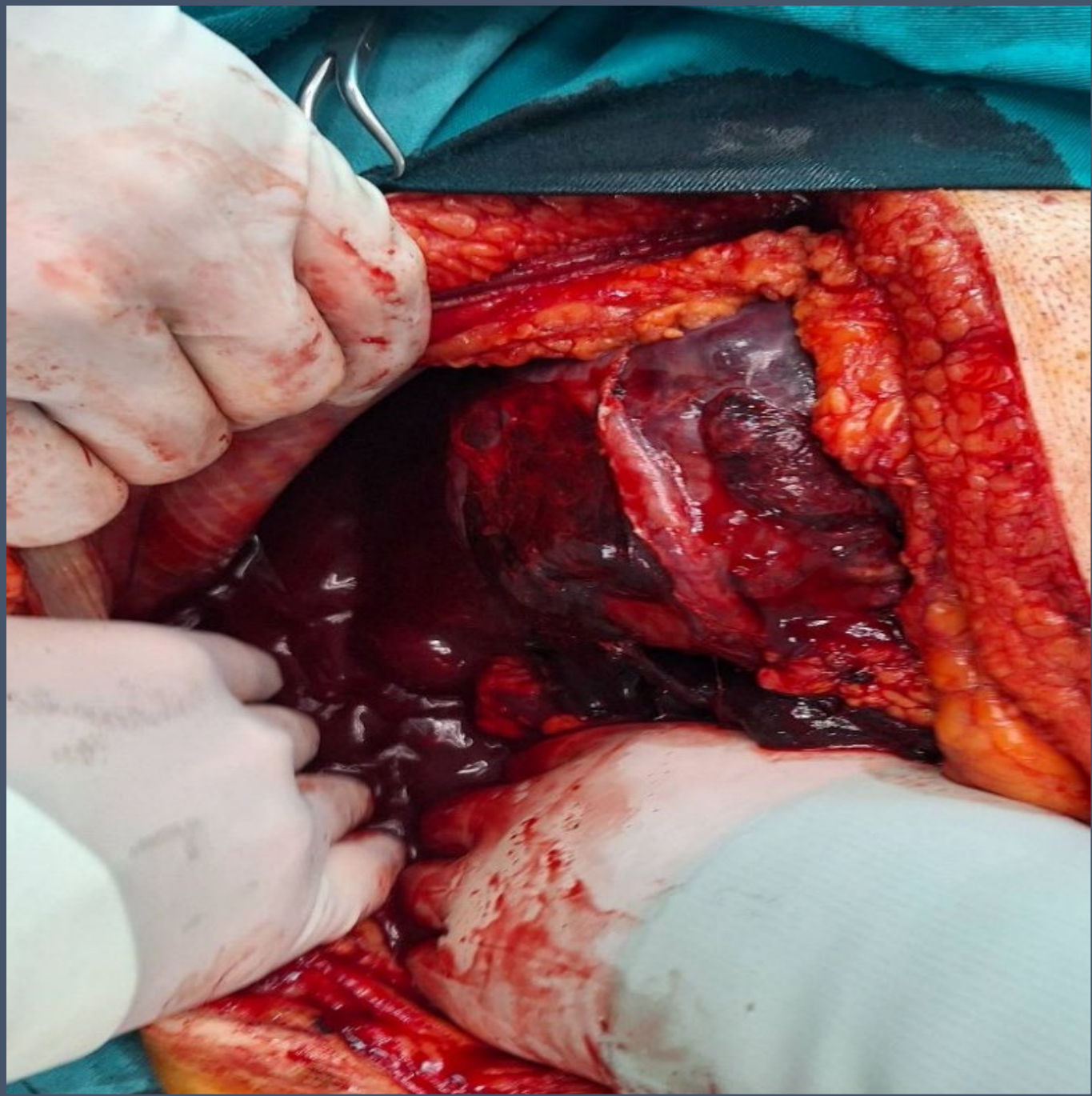


Figure 1. Intraoperative finding of a bleeding liver tumor

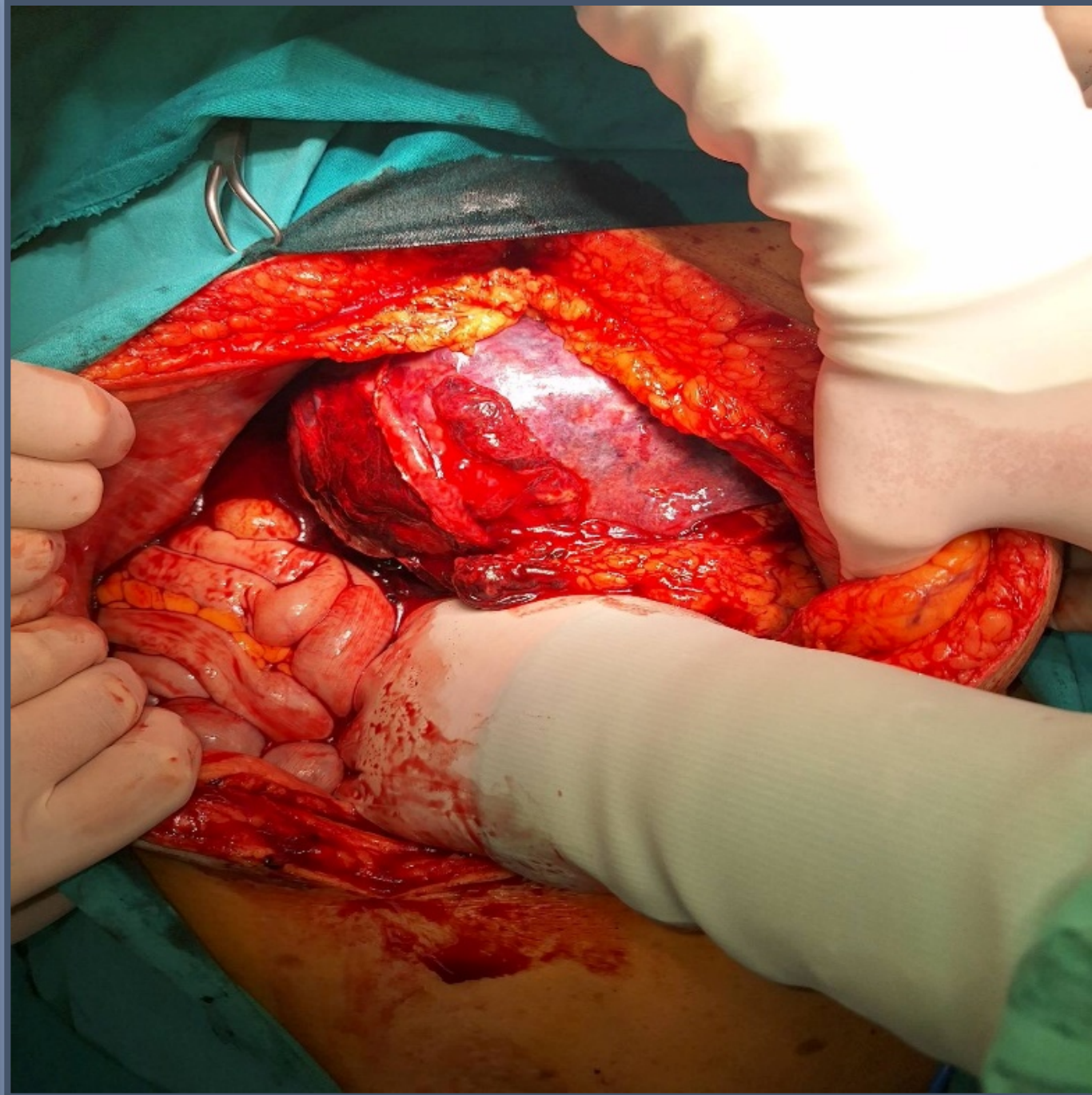


Figure 2. Hepatocellular carcinoma localized in the left lobe of the liver

The liver is mobilized, the occluded left pedicle is shown. Transection of the liver parenchyma is approached with a US knife and "crash clamp" technique with adequate clipping and suturing of the elements.

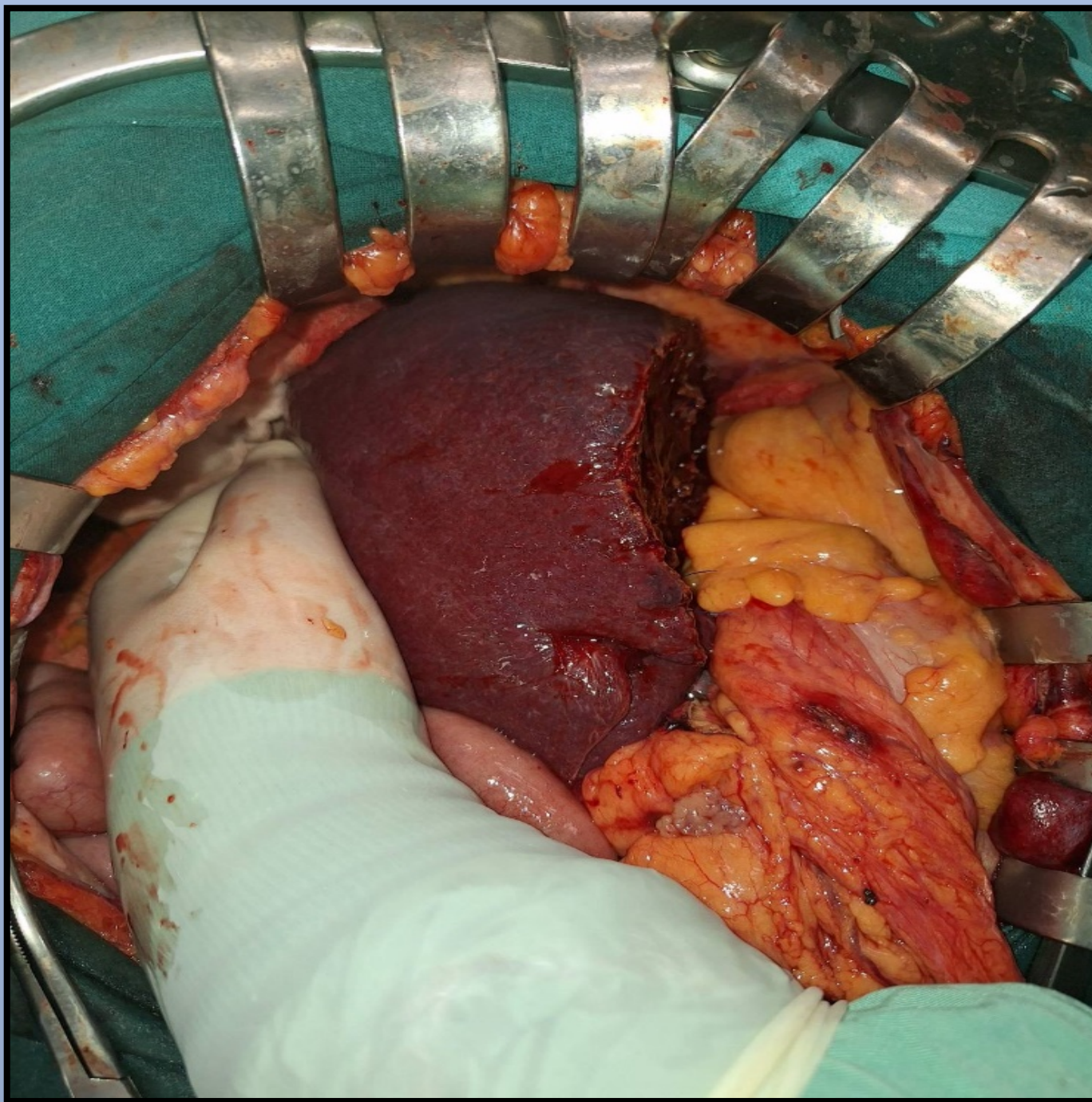


Figure 3. Resected left lobe of the liver - left hemihepatectomy

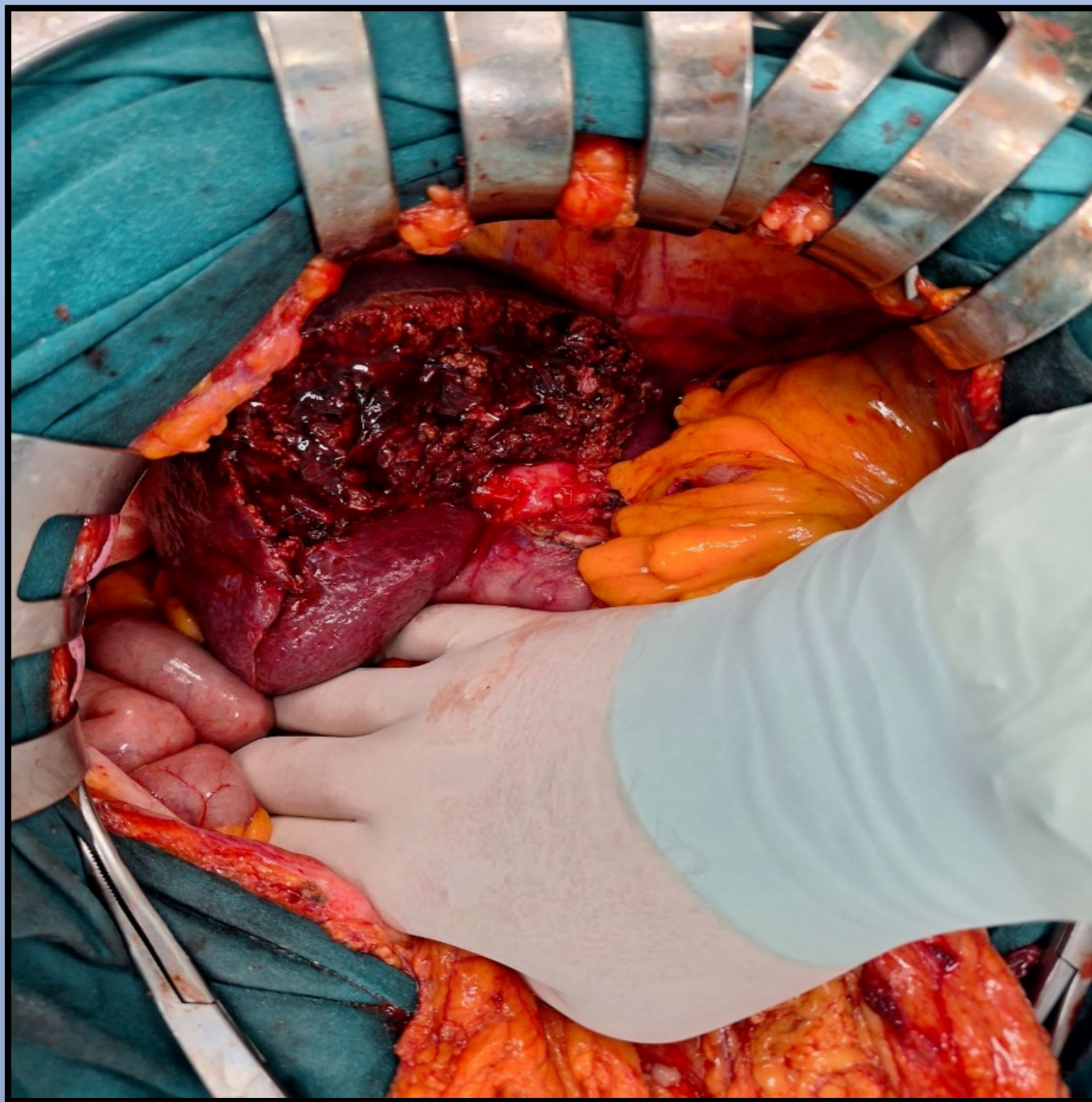


Figure 4. Liver resection surface

The tumor lesion was removed from the abdomen, additional hemostasis was performed with sutures, after which the resection area was treated with APC and fibrin glue. Abdomen lavaged. Drained with two drains placed subhepatic and subphrenic, and the abdomen is closed in layers.

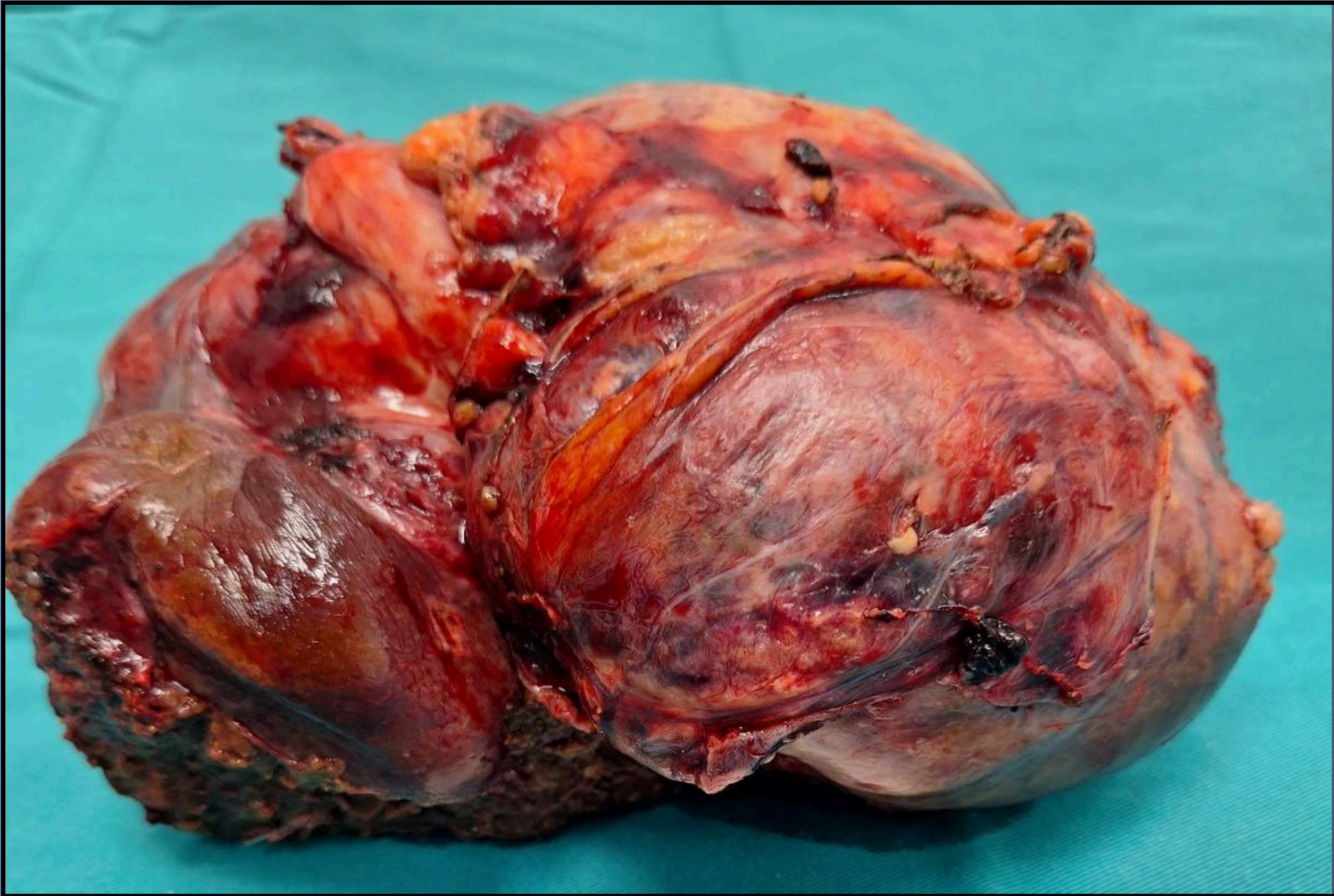


Figure 5. Removed tumor from the left lobe of the liver

Postoperatively, the patient was transferred to the Clinic for Anesthesia and Intensive Care for intensive monitoring. Upon admission, he is connected to invasive and non-invasive hemodynamic and respiratory monitoring, during the day he wakes up, is separated from KMV and extubated according to the protocol, and breathes spontaneously with oxygen supplementation through an oxygen mask, and satisfactory saturation in the periphery is achieved. Included triple antibiotic therapy, water and electrolyte correction, and included ulcer protective, thromboprophylactic and other supportive therapy.

The next day, the patient was transferred to the Clinic for General and Abdominal Surgery awake, conscious, hemodynamically and respiratoryly stable. On the third postoperative day, basic laboratory tests were performed, and an improvement in the hemogram was recorded: Er: 3.55 (1e12)/L; and Hgb: 110 g/L, albumins of lower values 25g/L, and 20% albumin in a dose of 100ml is prescribed. Laboratory analyzes were also repeated on the fourth postoperative day, and the parameters were without significant changes in values. Electrolyte status monitored daily, and electrolyte imbalance corrected according to the findings. During hospitalization, he was treated with antibiotics, crystalloids, ulcer-protective therapy, analgesics, antihypertensives, with electrolyte replacement as well as continuous thromboprophylaxis. Dissecting the drains in continuous reduction and they are removed on the seventh postoperative day. On the eighth postoperative day, the patient is discharged to home treatment with stable, satisfactory surgical findings. The operative wound is neat, healing per primam intention, and half of the skin sutures have been removed. After 11 days, the patient comes for a follow-up examination in good general condition, without complaints, locally normal findings, and the second half of the skin sutures are removed. Two months after the operative treatment, the patient comes for a follow-up examination with a pathohistological finding, good general condition, and an oncologist's examination is recommended, and the next control is planned for three months with the findings of NMR of the abdomen and AFP.

Discusion

Hepatocellular carcinoma is the most common primary malignancy of the liver. It is the sixth most common cancer in the world and the third leading cause of death from cancer (2). Spontaneous rupture of hepatocellular carcinoma with intraperitoneal bleeding is a potentially life-threatening complication. Hepatocellular carcinoma is responsible for 15% of spontaneous hepatic bleeding in areas with a high prevalence of this carcinoma (3). The mechanism that leads to spontaneous tumor rupture is still not fully understood. Factors such as tumor size, subcapsular location, tumor necrosis, local increase in tumor pressure, vascular erosion, portal hypertension, coagulopathy, and previous vascular injury may contribute to HCC rupture (4). Liver rupture is the third cause of death in HCC after tumor progression and liver failure. Risk factors for spontaneous HCC rupture are cirrhosis, hypertension, extrahepatic invasion, ascites, and a liver mass larger than 5 cm (5). There is no single guideline for the treatment of patients with ruptured HCC. The treatment is generally personalized for a specific person. Treatment consists of conservative treatment, TAE/TACE, liver resection or a combination of TAE/TACE and liver resection (5).

Conclusion

Spontaneously ruptured hepatocellular carcinoma is a rare and life-threatening complication of hepatocellular carcinoma. And if the leading symptom is abdominal pain in spontaneously ruptured hepatocellular carcinomas, in our case report we presented a spontaneous finding during elective surgery of a bleeding tumor of the left lobe of the liver. Liver resection was performed - left hemihepatectomy and the mentioned tumor was removed, with this procedure the bleeding was stopped, hemorrhagic shock was prevented, and the ultimate goal was achieved, namely liver resection and tumor removal.

References

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