Between 2014 and 2017, the records of 480 patients who underwent PTBD in our center due to malignant biliary obstruction were reviewed retrospectively. The causes of biliary obstruction were Klatskin tumor (n = 210), colorectal metastases (n = 45), metastases of different genesis (n = 90), gallbladder cancer (n = 55), cholangiocellular carcinoma (n = 40), hepatocellular carcinoma (n = 30), hepatoduodenal ligament lymphadenopathy (n = 10). The average age was from 25 to 90 years (62 ± 13). The average level of total bilirubin at admission was 480 μmol/L (255 ± 177 μmol/L). In 37% of cases PTBD was performed as the first stage before hepatectomy, in 63% of cases - PTBD was a palliative treatment for unresectable patients. In 79% of cases prepapillary drainage was placed. Only external drainage was placed when it was impossible to recanalize a stricture – in 20% of cases; in 1% of cases drainage was placed transpapillary.

The technical success rate was 100%. The total bilirubin level, decreased at an average on the 10th day. The most common complication was the migration of drainage more often associated with external drainage (60%). The difference between left or right side approach did not reach statistical significance (right-sided - 58% and left-sided - 42%). Acute pancreatitis developed only when the drainage was performed transpapillary (in 3 of 5 patients) or in case of long common bile duct (1 case) and when a contrast agent got into Wirsung canal. Acute cholangitis in case of prepapillary performed drainage developed only when a contrast agent got into the undrained second-order bile ducts (9%).

The number of hemorrhagic complications was 22, in 2 (1.1%) cases laparotomy was required due to intra-abdominal hemorrhage. Only 40 out of 210 palliative patients with Klatskin tumor were included in the survival assessment study because these cases had enough data to conduct study. In elderly and senile patients the one-year survival rate, of those who underwent chemotherapy, was 92%, the two-year survival rate was 60%. The one-year survival rate of patients who did not receive chemotherapy was 54%, the two-year survival rate was 16%. In young and middle aged patients one- and two-years survival rates, of those who underwent chemotherapy were 15%; in patients who did not undergo chemotherapy average life span was no longer than 32 weeks. 45 palliative patients with colorectal metastases were included in the survival assessment study. Survival rates were compared based exclusively on patients’ age all the patients received chemotherapy. In elderly and senile patients one-year survival rate was 38%; average life span was no longer than 32 weeks. In young and middle aged patients the one-year survival rate was 50%, the two-year survival rate was 15%.

PTBD procedures is a method of choice for proximal malignant biliary strictures and can significantly extend life expectancy of unresectable patients.