bleeding (n = 1), and emergent TACE for ruptured HCC (n = 1). In BCLC B stage, major complications developed in two patients (1 liver abscess and 1 septicemia in a patient with biliary invasion). In BCLC C stage, major complications developed in 29 patients (deterioration of liver function, hepatic encephalopathy, liver abscess, septicemia, biliary injury, disabling pleural effusion, variceal bleeding, spontaneous bacterial peritonitis, and acute kidney injury as alone or in various combinations) with 1-month mortality in one patient. The prevalence of major complication in BCLC C stage was largely affected by the extent of portal vein thrombosis (segmental:sectional:lobar:bilateral or main = 0.0%:5.0%:11.8%:25.0%). **Conclusion:** cTACE for HCC can be safely performed in the early and intermediate stage or in advanced HCC with limited portal tumor thrombosis.

OR3.4

Percutaneous Transpapillary Placement of Biliary Metallic Stent in Patients with Malignant Extrahepatic Biliary Obstruction: Outcomes of Double-Bare Stent versus Polytetrafluoroethylene-Covered Stent

Dong Il Gwon, Ibrahim Alrashidi, Joonho Hur, Hee Ho Chu, Chan Park, Jin Young Kim, Minho Park, Jong Woo Kim, Jin Hyoung Kim

Asan Medical Center, Seoul, South Korea.
E-mail: Dr.ialrashidi@gmail.com

Objectives: To investigate the outcomes of percutaneous transpapillary placement of biliary metallic stent in patients with malignant extrahepatic biliary obstruction and to compare the outcomes of the uncovered double-bare stent and polytetrafluoroethylene (PTFE)-covered stent. **Methods:** From April 2015 to December 2018, 83 patients (50 men, 33 women; mean age, 64.3 years; age range, 36–89 years) with malignant extrahepatic biliary obstruction were enrolled in this retrospectively study. All patients underwent percutaneous transpapillary stent placement: uncovered double-bare stent placement in 40 patients and PTFE-covered stent placement in 43 patients. **Results:** There were no significant differences in technical success (P > 0.999), successful internal drainage (P = 0.473), complications (P = 0.217), patient survival (P = 0.107), and stent patency (P = 0.103) and between the two groups. Overall patient survival times were 90 days (95% confidence interval [CI], 30–150 days) in double-bare stent group and 219 days (95% CI, 99–339 days) in covered stent group, respectively. Stent occlusion occurred in seven patients (20%) at a mean of 114 days in double-bare stent group (food reflux with sludge [n = 5] and tumor ingrowth [n = 2]) and in 16 patients (41%) at a mean of 170 days in covered stent group (food reflux with sludge [n = 8], tumor overgrowth [n = 5], stent migration [n = 1], blood clot [n = 1], and stent collapse due to subsequent duodenal stenting [n = 1]) (P = 0.153). Median stent patency times were 74 days (95% CI, 47–101 days) in double-bare stent group and 135 days (95% CI, 55–139 days) in covered stent group, respectively. **Conclusion:** Percutaneous transpapillary placement of the biliary metallic stent seems to be effective and safe in patients with malignant extrahepatic biliary obstruction. Stent type may not significantly affect technical and clinical outcomes.

OR3.5

Transarterial Therapy of Liver Tumors with Extrahepatic Blood Supply by Renal Artery and Its Branches

Khalid Ahmed Almasar, Reema Alrashed, Yousof Al-Zahrani, Mohammad Arabi

National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia.
E-mail: dr.almasar@hotmail.com

Objectives: To evaluate the prevalence and survival of patients with hepatocellular carcinoma supplied by the renal artery and its branches who underwent transarterial therapy. **Methods:** This was a retrospective review in patients with liver tumors with extrahepatic supply from renal artery and its branches who underwent transarterial therapy in National Guard Hospital between 2009 and 2017. Number of lesions treated, tumor size, type of renal arterial branch, mode of treatment, and overall survival were all evaluated. **Results:** During this period, renal arterial supply to liver tumors was identified in 15 patients (9 males and 6 females). Their age ranged from 55 to 78 years. Of the 15 patients, 11 patients were treated with transarterial embolization (73.3%), 2 patients received transarterial chemoembolization (13.3%), and radioembolization through renal arterial supply was performed in 2 patients (13.3%). Thirty-three lesions were treated. The mean tumor size was 8.2 cm (range 2.5–17.5). All patients had cirrhosis. Fourteen patients had hepatocellular carcinoma (93.3%) while one patient had a neuroendocrine tumor (6.7%). A branch from the right renal artery was seen in 8 patients (53.3%); inferior phrenic arising from the renal artery was identified in 5 patients (33.3%); the capsular branch of right renal artery was the supplying branch in 2 patients (13.3%). The overall survival of these patients ranges between 1 and 79 months, with median survival of 23.7 months. **Conclusion:** Transarterial therapy of liver tumors with extrahepatic supply via renal artery and its branches is feasible and safe.

OR3.6

Portal Vein Embolization with Ethylene Vinyl Alcohol Copolymer for Contralateral Lobe Hypertrophy before Liver Resection: Safety, Feasibility, and Initial Experience

Romaric Loffroy, Charles Mastier[1], Nicolas Falvo, Frank Pilleul[1], Olivier Facy, Marco Midulla, Olivier Chevallier

François-Mitterrand University Hospital, Dijon, [1]Leon Berard Cancer Center, Lyon, France.
E-mail: romaric.loffroy@chu-dijon.fr

Objectives: To report the preliminary experience with preoperative portal vein embolization (PVE) using ethylene vinyl alcohol (EVOH) copolymer liquid embolic agent. **Methods:** Patients with right-sided liver malignancies scheduled for extensive surgery and receiving induction of liver hypertrophy via right PVE with EVOH copolymer as the only embolic agent between 2014 and 2018 in two academic centers were retrospectively evaluated. Liver segments S2/3 were used to assess hypertrophy. Technical success rate, percentage of future liver remnant (FLR) increase, degree of hypertrophy of FLR, kinetic growth rate (KGR),