Abstract of the doctoral dissertation

"Endoscopic Treatment of Malignant Hilar Biliary Obstruction"

Malignant hilar biliary obstruction (MHBO) may be caused by cholangiocarcinoma, gallbladder carcinoma, hepatocellular carcinoma, pancreatic cancer, or metastases to lymph nodes located in the hepatic hilum. Endoscopic biliary stenting is the treatment of choice for both palliative and bridging therapy in patients with malignant biliary obstruction. There is a general consensus among experts that effective biliary drainage requires decompression of more than 50% of the liver volume, which often necessitates drainage of both hepatic lobes. However, investigators point to a significant lack of clear and consistent guidelines regarding the optimal therapeutic strategy for biliary stenting, as well as the absence of precise recommendations for the use of adjunctive therapeutic techniques such as radiofrequency ablation (RFA).

This doctoral dissertation was prepared in the form of a thematically coherent cycle of three publications, comprising a review article with elements of a systematic review and two original retrospective studies. The systematic review included 48 publications addressing endoscopic management of MHBO as well as current guidelines issued by major gastroenterological societies (ASGE, ESGE, Asia-Pacific consensus). The original studies were based on a homogeneous cohort of patients treated endoscopically at a single tertiary referral center.

The results demonstrated the superiority of uncovered self-expanding metal stents over plastic and fully covered metal stents in terms of overall survival and biliary stent patency. No clear impact of bilateral drainage on overall survival was observed. The use of RFA and systemic chemotherapy was associated with prolonged survival and longer stent patency. This dissertation provides a structured analysis of endoscopic management in a rare and challenging clinical entity, in which obtaining large study populations is inherently limited.