Received: 26 January 2020 | Accepted: 3 March 2020

DOI: 10.1002/ags3.12330

EDITORIAL

AGSurg Annals of Gastroenterological Surgery Open Access WILEY

Recent advances in hepato-biliary-pancreatic surgery

Despite recent improvements in diagnostic imaging techniques, hepato-biliary-pancreatic cancer has a poor prognosis in gastroenterological cancer. On the other hand, hepato-biliary-pancreatic surgery is making rapid progress worldwide to improve this outcome. In addition, techniques such as robot-assisted laparoscopic surgery have made remarkable progress.

Kokudo et al[1] reviewed the history of liver surgery. Laparoscopic hepatectomy has solved the issue of large incisional wounds, a major drawback of open liver surgery. They concluded that further innovation will be needed in order for safety and accuracy that is comparable to open abdominal surgery to be achieved in all surgical procedures, and liver surgery in the near future will be more precise and less invasive as it is supported by substantial progress in technologies.

Ishihara et al[2] analyzed data from a follow-up survey of biliary tract cancer patients registered from 2008 to 2013 in Japan to determine the outcomes of biliary tract cancer and validate the Japanese classification of this disease. In the UICC staging system, the regional lymph nodes in gallbladder cancer are the hepatic hilus nodes and number 13a is a distant lymph node. But in Japanese classification, regional lymph nodes are hepatic hilus nodes and the nodes cranial to the duodenal papilla on the posterior surface of the head of the pancreas. No statistically significant difference was observed between regional lymph node metastasis cases excluding number 13a and number 13a metastasis. The survival rate of patients with number 13a metastasis was significantly higher than that of patients with distant lymph node metastasis. They concluded that number 13a should be classified as a regional lymph node in cases of gallbladder cancer.

Pancreaticoduodenectomy (PD) is a complex operation with high perioperative morbidity and mortality, even in the high-volume centers. Since the development of the robotic platform, the number of reports on robotic-assisted pancreatic surgery have been on the rise. Zureikat et al[3] performed 500 minimally invasive robotic pancreatoduodenectomies and analyzed the learning curve, pancreatic fistula, etc., according to the operator program. The results conclude that a structured implementation of robotic pancreaticoduodenectomy could be associated with excellent outcome. Beane et al[4] describe that, for surgeons who have exceeded the learning curve for robotic pancreaticoduodenectomy, the performance improvement of robotic pancreatoduodenectomy with vascular resection can be observed after 35 cases. On the other hand, pancreatic ductal cancer still has the worst prognosis. In recent years, neoadjuvant chemotherapy and conversion surgery have significantly improved the prognosis compared to 10 years ago. Motoi et al[5] reviewed the efficacy of neoadjuvant treatment for resectable pancreatic cancer. Yamaue reviewed the history of pancreatic surgery in Japan. He concluded that in the era of newly developed chemotherapeutic agents, one should reconsider the oncological benefits of Fortner's regional pancreatectomy with concomitant perioperative chemotherapy, and other forgotten treatment strategies should be newly developed.[6]

We hope that hepato-biliary-pancreatic surgery will make further progress.

DISCLOSURE

The author declares no conflicts of interest for this article.

Akihiko Horiguchi

Department of Gastroenterology, Fujita Health University School of Medicine Bantane Hospital, Nagoya, Japan

Correspondence
Akihiko Horiguchi, Department of Gastroenterology, Fujita Health University School of Medicine Bantane Hospital, Nagoya, Japan.
Email: akihori@fujita-hu.ac.jp

ORCID

Akihiko Horiguchi https://orcid.org/0000-0002-2187-1396

REFERENCES

1. Kokudo N, Takemura N, Ito K, Fuminori M. The history of liver surgery: achievements over the past 50 years. Ann Gastroenterol Surg. 2019;4.
2. Ishihara S, Horiguchi A, Miyakawa S, Endo I, Miyazaki M, Takada T. Biliary tract cancer registry in Japan from 2008 to 2013. J Hepatobiliary Pancreat Sci. 2016;23:149–57.
3. Zureikat AH, Beane JD, Zenati MS, Al Abbas AI, Boone BA, James Moser A, et al. 500 minimally invasive robotic pancreatoduodenectomies. Ann Surg. 2019. https://doi.org/10.1097/SLA.0000000000003550
4. Beane JD, Zenati M, Hamad A, Hogg ME, Zeh HJ, Zureikat AH. Robotic pancreatoduodenectomy with vascular resection: outcomes and learning curve. Surgery. 2019;166:8–14.

5. Motoi F, Unno M. Neoadjuvant treatment for resectable pancreatic adenocarcinoma: what is the best protocol? Ann Gastroenterol Surg. 2019;4.
6. Yamaue H. History of pancreatic surgery in Japan: respect to the Japanese pioneers of pancreatic surgery. Ann Gastroenterol Surg. 2019;4.