Tumor resection through a pancreaticoduodenectomy is the only option for potentially curative treatment. Only 10% to 20% of patients presenting with pancreatic tumors are resectable with a 15-20% 5-year survival and a median overall survival of 20-24 months. We present our 20-years’ experience in pancreaticoduodenectomy. The aim of our study is to evaluate the surgical complications, morbidity and mortality rates and to compare the overall outcomes between past and present to improve surgeons’ performances and patients’ outcomes.

Methods: From 1994 to present, 370 patients underwent pancreaticoduodenectomy. Of these, we were able to retrieve the medical records of 300 patients. 30% of patients were non-Lebanese. The median age was 61 years (range 13-84), 193(64.3%) males and 107 (35.7%) female. Median body mass index (BMI) was 27.1 (range 15.6 - 43.7). The median levels of Ca 19-9 and CEA were 86.6 IU/ml (0.6-45707) and 2.6 µg/L (0.4-8627.8) respectively. 48 patients had a positive family history of cancer, 10 patients received neoadjuvant chemotherapy for size reduction prior to operation. 92 patients required preoperative biliary stenting. Abdominal Computed Tomography (CT) scan was performed in 276 patients and magnetic resonance imaging (MRI) in 24 patients.

Results: Overall survival was 90% at 6 months postoperatively. The 1, 3, 5 and 10 year survivals were: 85%, 35%, 15%, and 7% respectively. The 30 days mortality rate was 2.5%.

Of the 300 pancreaticoduodenectomy, 252 underwent standard Whipple procedure and 48 pylorus preserving pancreaticoduodenectomy. The mean operative time was 300 minutes (75-755 min). 23 patients required re-laparotomies for management of leak, bleeding or septic shock due to abscess collection. The median length of hospital stay postoperatively was 13 days (range 4-100 days). 75 (25%) patients developed pancreatic fistulas (grades A, B and C) with 43 (56.3%) grade A, 21 (28%) grade B and 11(15%) grade C. The median amylase level postoperative day 3 was 40 (range 2 - 49250), and day 5 is 33 (range 0-23295). 5 patients required re-laparotomies for biliary leak. 10 patients required re-laparotomies for control of bleeding. Delayed gastric emptying was present in 31 patients (10.3%). The median length for resuming oral intake was 6 days (range 1 – 43 days). 85 patients received total parenteral nutrition (28.3%). Surgical site infection (SSI) was observed in 34 patients (11.3%).

Of the 300 specimens, 173 (52%) were pancreatic adenocarcinomas, 59 Ampullary carcinoma, distal cholangiocarcinoma in 28, duodenal cancer in 15, neuroendocrine non-functioning cancer in 11, neuroendocrine functioning cancer in 5, intra papillary mucinous neoplasm (IPMN) invasive in 6 and other different pathologies in 3 patients.

Conclusion: Pancreaticoduodenectomy is the only chance of cure for patient with malignant peri-ampullary tumor. Unfortunately, this complex procedure is associated with significant mortality and morbidity even in high volume centers. At our institution, the number of patients has been increasing annually with good results in terms of morbidity and mortality compared to other international centers.