INTRODUCTION:

Pancreatic cancer is often associated with poor prognosis. As a result of this, five year survival rates remained low about 10-20%. Early detection offers the best chance of survival with proper preoperative evaluation an important task. Various imaging modalities such as endoscopic ultrasound (EUS), CT scan, MRI and PET scan have been evaluated in determining staging and suitability of patients for surgery 1.

At the same time, the most important prognostic factor in most pancreatic resection is the ability to achieve a complete resection margin. The role of extended lymphadenectomy and vascular resection in determining prognosis remains controversial as some literature showed no benefit in extended resection since considerable morbidity and mortality is associated with such undertakings.

However, recent evidence suggests that extended resection can be performed safely with perioperative morbidity and survival to be similar to those without extended resection 2. Here, we report a case of a 63 year old lady who had pancreatic head carcinoma with portal vein infiltration and presence of celiac nodes of preoperative EUS who had a pancreatoduodenectomy with portal vein excision/reconstruction and extended lymphadenectomy.

CASE REPORT:

Madam K, a 63 year old lady presented with features of obstructive jaundice with significant weight loss and appetite. She initially sought treatment at a private hospital where a CT scan abdomen done showed a pancreatic head tumour. Her blood investigations revealed a raised CA19-9 of 876.5 U/L with deranged liver function test. ERCP was attempted but failed.

She was referred to a local hospital where an ERCP was done and biliary stenting was successful. An endoscopic ultrasound (EUS) was also performed revealed a pancreatic head mass with involvement of the portal vein and presence of lymphadenopathy at the celiac trunk. She was informed that tumour was inoperable and suggested for palliative chemotherapy.

She then presented to us for second opinion. A repeat CT scan done confirmed a pancreatic head tumour with invasion of the portal vein and second part of the duodenum. She was counselled for surgery and the risk involved where she agreed for surgery. She underwent pancreatoduodenectomy with portal vein excision and reconstruction along with extended lymphadenectomy.

Intraoperatively, no portineal seedlings noted and liver was smooth. Multiple lymph nodes noted along the celiac trunk and porta hepatitis which was completely removed. The pancreatic head tumour was noted with infiltration to the portal vein (Fig.1). Pancreatoduodenectomy was done along with excision about 3 cm of the portal vein confluence. Portal vein reconstruction was done with end to end anastomosis using Prolene 5/0 (Fig. 2). Frozen section was also sent intraoperatively showing no involvement of tumour at the proximal common hepatic duct and distal pancreas. The entire specimen was removed en-bloc for histopathological examination (Fig. 3 and 4). Post operative recovery was uneventful.

Her HPE report revealed a well differentiated adenocarcinoma of the head of pancreas with infiltration into the portal vein. There was lymphovascular permeation and lymph nodes harvested negative for malignancy.

Discussion

At one time, surgical intervention in pancreatic cancer was associated with high perioperative morbidity and mortality. Today, perioperative complications can be less than 5% in specialized pancreatic units 3. This is the result of proper preoperative staging with various imaging modalities as well as advancement in surgical techniques 4. However, the 5 year survival and prognosis of pancreatic cancer remained low. Literature has shown that compete resection margin remained the most important prognostic indicator 5.

In our patient, she had CT scan and EUS performed. CT scan remained the “gold standard” for clinical staging as it can predict up to 80-90% of patient who is suitable for resection. CT scan is able to look at local tumour extension with contiguous organ invasion, vascular involvement, hepatic metastases and lymph node metastases, and often correlates well with surgical findings 6.

EUS, although useful in detecting small tumours and invasion into vascular structures, is less effective in assessing nodal involvement 7. As in the case of our patient, surgical opinion was initially in view of earlier EUS findings but following surgery her HPE from the lymph node harvested was negative for malignancy which may concur with evidence regarding use of EUS for nodal assessment.

Recent evidence regarding extended lymphadenectomy showed no survival benefit in performing such extensive resection although positivity in lymph node involvement will go a long way in predicting prognosis of the patient 8.

The most important prognostic factor is resection margin. When there is vascular involvement, the role of vascular excision along with pancreatoduodenectomy is often attempted to achieve an R0 or R1 resection. Isolated venous involvement should not be a contraindication to pancreatoduodenectomy 9. Tseng et al showed that portal vein excision along with pancreatoduodenectomy when there is venous involvement showed improvement in survival benefit compared to those deemed unresectable. The procedure can be performed safely in experienced pancreatic unit with similar morbidity and mortality as pancreatoduodenectomy alone although survival benefits remained similar 10,11.