G Chir Vol. 34 - Suppl 1, 2013 - p. 35
Supplement to n. 5/6, May-June 2013

abstracts

XXV National Congress of the "Società Polispecialistica Italiana dei Giovani Chirurghi"
13-15 June 2013, Bari, Italy

ALPPS PROCEDURE FOR THREE MASSIVE COLORECTAL LIVER METASTASES. LITERATURE REVIEW

B. IELPO*, E. VICENTE, Y. QUIJANO, H. DURAN, E. DIAZ, I. FABRA, C. OLIVA, S. OLIVARES, V. FERRI, R. CARUSO, J.C. PLAZA, ALVARO IÑIGO, HERNANDO OVIDIO, A. CUBILLO

General Surgery, Sanchinarro Hospital, San Pablo Ceu University, Madrid, Spagna

Objective: Most of the time extended liver resections cannot be realized because of an insufficient future remnant liver. To induce an increased and rapid hepatic hypertrophy in order to reduce this complication, associating liver partition and portal vein section for staged hepatectomy (ALPPS) has been recently described. Only few cases have been reported and, up to now, no literature review is available. The aim of this study is to present 3 cases that underwent ALPPS in our institute and perform the first literature review.
Methods: Between January 2011 and October 2012, three ALPPS procedures were performed in patients with bilateral liver metastases. CT scan was performed before completing the second stage of ALPPS procedure in order to calculate the future remnant liver hypertrophy. A comprehensive English literature review was conducted.
Results: Our cases showed a mean of 71% (range: 60-80%) of hypertrophy of the future remnant liver achieved 7 days after ALPPS. Mean hospital stay was 14 days (range: 12-20 days). One patient experienced severe liver failure and two patients had no complications after the procedure. After a mean follow up of 10 months (range: 4-25 months) the three patients were free of disease. In a literature search, we identified 17 publications describing a total of 77 patients with a mean hypertrophy rate of 74% and 29% biliary leak.
Conclusions: ALPPS is an effective and reliable technique used to induce an increased and rapid growth of the future remnant liver. Further studies are warranted to confirm these results.

POSTHEPATECTOMY LIVER FAILURE AFTER SIMULTANEOUS VERSUS STAGED RESECTION OF COLORECTAL CANCER AND HEPATIC METASTASES

D. PATRONO*, G. PARALUPPI, M. PERINO, M. PALISI, G. MIGLIARETTI, P. BERCHIALLA, R. ROMAGNOLI, M. SALIZZONI

Chirurgia Generale 2, Centro Trapianto di Fegato, A. O. Città della Salute e della Scienza di Torino, Presidio Molinette, Torino, Italia
Dipartimento di Igiene, Università di Torino, Torino, Italia

Objective: Posthepatectomy liver failure (PHLF) is the third most frequent complication and the major cause of postoperative mortality after resection of colorectal cancer liver metastases (CRLM).
In case of synchronous resectable CRLM, it's still unclear if surgical strategy (simultaneous versus staged resection of colorectal cancer and hepatic metastases) influences the incidence and severity of PHLF. The aim of this study was to evaluate the effects of these two approaches on PHLF and on the early and long-term outcome.
Methods: Retrospective study on 106 consecutive patients undergoing hepatectomy for synchronous CRLM between 1997 and 2012.
Results: Of 106 patients, 46 underwent simultaneous resection and 60 had staged hepatectomy. The rate of PHLF was similar between groups (16.7% vs 15.2%; p=1) and subgroup analysis restricted to patients undergoing major hepatectomy confirmed this observation (31.8% vs 23.8%; p=0.56). Propensity-score analysis showed that pre-operative total bilirubin level and the amount of intra-operative blood transfusion were independently associated with an increased risk of PHLF. Nevertheless, the risk of severe PHLF (grade B - C) was increased in patients who underwent simultaneous resection and major hepatectomy (OR: 6.66; p=0.003). No significant differences were observed in severe (Dindo – Clavien 3 – 4) postoperative morbidity (23.9% vs 20.0%; p=0.64) and survival (3 and 5-year survival: 55% and 34% vs 56% and 33%; p=0.83).
Conclusions: The risk of PHLF is not associated with surgical strategy in the treatment of synchronous CRLM. Nevertheless, the risk of severe PHLF is increased in patients undergoing simultaneous resection and major hepatectomy.

---

* *Presenting Author*

G Chir Vol. 34 - Suppl 1, 2013 - p. 36
Supplement to n. 5/6, May-June 2013

abstracts

XXV National Congress of the "Società Polispecialistica Italiana dei Giovani Chirurghi"
13-15 June 2013, Bari, Italy

PHASE II MULTICENTRE STUDY EVALUATION OF 90-YTTRIUM RESIN MICROSPHERES (SIR-SPHERES) IN UNRESECTABLE, HEAVILY PRE-TREATED COLORECTAL LIVER METASTASES

G. PATTARO*, R. MANCINI, R. SCIUTO, R. GOLFIERI, F. IZZO, P. CAGOL, M. COSIMELLI

Div. Chirurgia Generale ad indirizzo Epatobiliopancreatico, Istituto Tumori di Roma "Regina Elena", Roma, Italia
Div. Medicina Nucleare, Istituto Tumori di Roma "Regina Elena", Roma, Italia
Div. Radiologia, "S. Orsola-Malpighi", Bologna, Italia
Div. Chirurgia Generale ad indirizzo Epatobiliopancreatico, Istituto Tumori di Napoli "G Pascale", Napoli, Italia
Div. Chirurgia Generale, Università degli Studi di Udine, Udine, Italia

Objective: To evaluate selective internal radiation therapy (SIRT) as salvage therapy for colorectal liver metastases pts. progressing after oxaliplatin- and irinotecan chemotherapy, particularly rate of response, toxicity, feasibility and survival.
Methods: Fifty patients with absence of vascular anomalies and pulmonary shunt <10% were injected by ^{90}yttrium microspheres into hepatic artery. The median follow-up was 11 months. Most patients had synchronous disease (72%), >4 hepatic metastases (58%), 25-50% liver involvement (60%) and bilateral spread (70%).
Results: Early and late (>48 hrs) WHO G1-2 toxicity was 16% and 22%, respectively. Forty-six pts were evaluable for response under RECIST criteria. One (2%) had complete response (CR), 11 (22%) partial response (PR), 12 (24%) stable disease (SD) and 22 (44%) progressive disease (PD). The median survival was 13 months ,16 months in the responders and 8mos. PD (p=.0006). Two-year survival was 40.3% and 0% respectively. Median time to progression was 4 months. Various unfavourable molecular markers (Ki-67, p-53 +, Survivin) were underexpressed in the responders post-treatment.
Conclusions: In the heavily pretreated pts, ^{90}yttrium microspheres produced an encouraging median survival, with acceptable toxicity, that compares favourably with phase II/III studies of chemotherapy used as second- or more lines. Response correlates with favourable biological profile.

INCIDENTAL DIAGNOSIS OF LEIOMYOSARCOMA OF THE INFERIOR VENA CAVA: A CASE REPORT

G. DI MEO*, E. D'AMBROSIO, A. FIORELLA, F. FRAGASSI, A. GIRARDI, R.M. ISERNIA, A. PASCULLI, L.I. SGARAMELLA, M. TESTINI

Dipartimento di Scienze Biomediche ed Oncologia Umana, Unità Operativa Dipartimentale di Chirurgia Endocrina, Digestiva e d'Urgenza, Università degli Studi di Bari "Aldo Moro", Bari, Italia

Objective: Primary tumors of the inferior vena cava (IVC) are rare, with leiomyosarcoma (LMS) representing the vast majority. Indeed, less than 300 cases have been published in literature.
Methods: A 60-year-old man was admitted to emergency at our Academic Hospital for fever, lipothymia and mild anemia. A retroperitoneal mass of 8 cm of diameter, overrunning the lumen of the IVC, extending to the renal vein confluence with retroperitoneal lymph-node involvement, without liver and lung metastases being detected by imaging. The surgical exploration of the abdomen showed an endoluminal mass arising from the middle portion of the IVC. An en-bloc resection of the solid mass was performed. Intraoperative frozen-section examination of the IVC resected wall demonstrated tumor-free margins. A reconstruction of the IVC using a primary direct suture was performed. A diagnosis of leiomyosarcoma of the IVC was confirmed by histology.
Results: A disease-free condition was evidenced by imaging during a 2-years follow-up.
Conclusions: The peculiarity of this reported case was that the lipothymia crisis occurred with no apparent warning , without any of the usual signs preceding the diagnosis of the IVC LMS. This crisis usually suggests the presence of cerebrovascular, cardiac, brain or endocrine diseases. Therefore, lipothymia could even be the isolated sign of a large LMS of the IVC, also when it affects its middle portion. Accordingly, when a lipothymia appears in the absence of diseases usually correlated to it, an abdominal CT scan would be advisable to detect a tumor of the IVC.

---

* *Presenting Author*

G Chir Vol. 34 - Suppl 1, 2013 - p. 37
Supplement to n. 5/6, May-June 2013

abstracts

XXV National Congress of the "Società Polispecialistica Italiana dei Giovani Chirurghi"
13-15 June 2013, Bari, Italy

ORGAN INVOLVEMENT IN CYSTIC ECHINOCOCCOSIS IN OUR EXPERIENCE

R. SHKJEZI*, A. DIBRA, I. AKSHIJA, A. PILACA, V. GJONI, FRASHERI PRENDUSHI XHENSILA, A. NELAJ, A. HOXHA

Service of General Surgery, "Mother Teresa" University Hospital Centre, Tirana, Albania,
Service of Infectious Disease, "Mother Teresa" University Hospital Centre, Tirana, Albania,
Faculty of Medicine, Catholic University "Our Lady of Good Council", Tirana, Albania,
Faculty of Nursery, University of Tirana, Tirana, Albania,
Department of Parasitology, Public Health Institute, Tirana, Albania,
Service of Statistics, "Mother Teresa" University Hospital Centre, Tirana, Albania

Objective: Cystic Echinococcosis (CE) is a parasitic disease caused by *Echinococcus granulosus*. It may involve many organs but affects most commonly liver and lung. We performed a study to understand different organ involvement of CE among 333 Albanian patients recovered in "Mother Teresa" University Hospital Centre of Tirana, Albania during the period 2005-2011.
Methods: According to medical records, about 59% (195/333) were female and 41% (138/333) male. 13% of patients had done 2 or more recovers for primary or secondary infection. The most affected age group was 6-15 years old with 22% (73/333), while age group 1-5 years old had 2% (6/333) of cases.
Results: Liver was the organ more affected from CE in 76.6 % (255/333) patients, followed by lung in 11.1 % (37/333), miocard 1.2 % (4/333), vertebra 1.2 % (4/333), kidney 0.6 % (2/333), biliary tract, genitals and spleen 0.3 % (1/333) each of them, and other structure 8.4 % (28/333). About 85% (286/333) of these patients underwent surgery (conservative or radical) as treatment. Diagnose was based in serological findings for anti-Echinococcus antibodies, ultrasound, CT/RMI.
Conclusions: This study confirms that CE is a disease which may affect every organ but has affinity for the liver and lung. In this hospital centre, the main protocol treatment is based in surgery by cyst emptying, removing large part of it and staring inside great omentum for abdominal cyst location.

DUODENAL ADENOCARCINOMA: A CASE REPORT

G. ROMANO, A. AGRUSA, G. FRAZZETTA, G. DE VITA, D. CHIANETTA, G. DI BUONO*, G. GULOTTA

Azienda Ospedaliera Universitaria Policlinico "P. Giaccone", Università di Palermo, Palermo, Italia

Objective: Cancers of the small intestine are rare pathologies. They occur with vague and unspecific symptoms and cause many problems in differential diagnosis.
Methods: A 64-years-old man, smoker, suffered inappetence, nausea and vomit over about 20 days until the presence of melena led to his admission to our hospital. His history included diabetes mellitus and moderate alcohol intake. The objective examination showed a hard-inelastic swelling in epi-mesogastric region. Laboratory data showed an increase of leukocytes and elevated level of CA 19-9. Esophagogastroduodenoscopy showed a duodenal vegetans neoformation, subjected to examination biopsy and bacterial culture. Computed tomography scans showed a voluminous duodenal mass without safe plans of cleavage with the head of the pancreas. The biopsy results were not decisive for the presence of necrotic tissue. The microbiological culture was positive for Candida Glabrata mimicking an advanced mycotic abscess. Laparotomy revealed a palpable hard mass in duodenum. Cephalic duodenopancreatectomy was performed.
Results: Postoperative period was regular. The patient resume eating during the sixth postoperative day and was discharged in good conditions. The final histological diagnosis was papillary moderately differentiated adenocarcinoma with expansive growth in duodenal wall. There was no lymph node involvement or distant organ metastasis.
Conclusions: The duodenal tumors are rare pathologies. There is association with familial adenomatous polyposis, Cronh disease, alcohol abuse, smoking, peptic ulcer. Diagnosis is based on endoscopic and imaging techniques. The main prognostic factors are tumor stage, lymph node involvement and metastasis. When is possible we perform a radical approach reserving palliative treatment for advanced neoplasm.

---

* *Presenting Author*

G Chir Vol. 34 - Suppl 1, 2013 - p. 38
Supplement to n. 5/6, May-June 2013

abstracts

XXV National Congress of the "Società Polispecialistica Italiana dei Giovani Chirurghi"
13-15 June 2013, Bari, Italy

PET SCAN AS PROGNOSTIC FACTOR OF NEUROENDOCRINE TUMOR OF THE PANCREAS

B. IELPO, V. FERRI*, E. VICENTE, R. CARUSO, Y. QUIJANO, H. DURAN, E. DIAZ, I. FABRA, C. OLIVA, S. OLIVARES, J.C. PLAZA, M. HIDALGO, L. GARCIA, A. MURO

General Surgery, Sanchinarro Hospital, Madrid, Spagna

Objective: Neuroendocrine tumors (NET) of the pancreas, despite increasing incidence, are still rare. In contrast to Ki-67 proliferation index and tumoral size that are well known prognostic factors of NET, the rule of PET scan is still unknown. Objective of this study is to test the role of the PET scan as prognostic factor of NET comparing with Ki-67 index and tumoral size.
Methods: We retrospectively gathered data about 78 consecutive patients that underwent pancreatic surgery form March 2009 to March 2011. NET were in 21cases of them (26.9%): 11 male and 10 women. Mean age was 58 years (range: 35–73 years). WHO NET classification was: 8 neuroendocrine tumor (38%); 9 well differentiated tumors (42%); 4 poor differentiated tumors (19%). Mean tumoral size was 1.56 cm in neuroendocrine tumor and 5.05 cm for neuroendocrine carcinoma ($p < 0.05$). The prognostic validation of PET is based upon a bivariant study: positive/negative PET with Ki-67 index and tumoral size.
Results: PET scan was positive in 12 cases (mean SUV of 6.34). Patients with positive PET scan has a Ki-67 mean index of 22% and a mean tumoral size of 4.5 cm; while patients with negative PET scan has a Ki-67 mean index of 11.6% and a mean tumoral size of 3.5 cm ($p < 0.05$).
Conclusion: Positive PET scan may represent a prognostic factor as it is related with a worse prognosis in NET of pancreas (higher tumoral size and Ki-67 index). Consistent further studies are needed to confirm this result.

AUTOIMMUNE PANCREATITIS MIMICS PANCREATIC CANCER IN PREGNANT WOMAN

F. VITTORE*, M. CARELLA, V. FERRARO, A. FIORELLA, F. FRAGASSI, A. GIRARDI, L.I. SGARAMELLA, G. PICCINNI, M. TESTINI

Dipartimento di Scienze Biomediche ed Oncologia Umana, Unità Operativa Dipartimentale di Chirurgia Endocrina, Digestiva e d'Urgenza, Università degli Studi di Bari "Aldo Moro", Bari, Italia

Objective: Autoimmune pancreatitis (AIP), generally observed in elderly people, can mimic pancreatic cancer both clinically and radiologically in rare cases.
Methods: A 39 year-old pregnant female, who was 14 weeks at time of presentation, was referred to our Academic Institution with a 10 day history of nausea, abdominal pain, and jaundice. Abdominal US and MRI both showed a pancreatic mass, suggestive of malignancy.
Results: To reduce bilirubin level, the patient underwent a US-guided external percutaneous transhepatic biliary drainage. A US-FNA was performed and a cytologic examination raised suspicions of an AIP. Circulating antibodies were in normal range[a]. Thanks to steroid therapy, and gradually improving clinical and laboratory features, diagnosis of AIP was confirmed. The patient was discharged. Pregnancy was successful and fetus was born healthy.
Conclusions: Pancreatic inflammatory lesions could mimic malignancy. CT scan and ERCP have a crucial role in the differential diagnosis and to stage pancreatic disease. When radiological examinations are contraindicated, as in pregnancy, pancreatic duct abnormalities should be evaluated by MRI. To avoid risk of invasive procedures such as surgical resection or biopsy, cytology could provide an accurate diagnosis. Remission, achieved with steroid therapy, is a diagnostic criteria for AIP. In case of pancreatic mass-forming disease in a pregnant, the differential diagnosis should be early and accurate, because a useless demolitive surgery involves a high rate of morbidity and interupts pregnancy. The prognosis depends on disease stage and timely intervention, balancing the survival of the fetus with the risk of maternal disease progression.

---

* *Presenting Author*

G Chir Vol. 34 - Suppl 1, 2013 - p. 39
Supplement to n. 5/6, May-June 2013

abstracts

XXV National Congress of the "Società Polispecialistica Italiana dei Giovani Chirurghi"
13-15 June 2013, Bari, Italy

GEMCITABINE PLUS NAB-PACLITAXEL SHOWS A SIGNIFICANT ANTITUMOR ACTIVITY IN RESECTABLE PANCREATIC CANCER. THE IMPORTANCE OF ELASTOGRAPHYC STUDY

B. IELPO*, Y. QUIJANO, H. DURAN, E. DIAZ, I. FABRA, C. OLIVA, S. OLIVARES, R. CARUSO, V. FERRI, E. VICENTE

Sanchinarro University Hospital, CEU San Pablo, Madrid, Spagna

Objective: Substantial antitumor activity has previously been demonstrated with addition of nab-placlitaxel to gemcitabine in patients with stage IV pancreatic cancer, disrupting stromal barrier surrounding the tumor. Our aim is to study the effectiveness of this combination in patients with operable pancreatic adenocarcinoma, evaluating stromal matrix by ecoendoscopic elastography.
Methods: Starting in March 2011 a prospective study was planned including 15 patients with potentially operable pancreatic cancer. Tumors were monitored with elastography before and after nab-placlitaxel plus gemcitabine treatment and all samples were evaluated to assess tumor regression rate (TRR) (Ryan score).
Results: Once neoadyuvancy finished, 6 patients have been excluded: due to local progression of malignancy (2), liver metastasis at surgery (1), well-differentiated neuroendocrine tumor (2) and PAN 1(1) in the pathological examination. The study enrolled finally 9 patients: 1 with complete pathological response (TRR 0) and 7 close to the complete response (TRR 1); 1 patient had no response at all (TRR 3). Specimen TRR 3 was poorly differentiated, while the remaining 4 and 4 were well and moderate differentiated, respectively. Specimen TRR 3 showed a decrease of only 6% of tissular stoma with elastography whereas the remaining 8 showed a significantly higher decrease with an average of 71% (range: 11.42-90.19%) ($p = 0.003$).
Conclusions: This regimen induced a high rate of pancreatic adenocarcinoma response, and this study suggests it can be easily monitored by elastography. Further study is needed to confirm these results.

RADIOFREQUENCY ABLATION OF LOCALLY ADVANCED PANCREATIC CARCINOMA: A REPEATABLE PROCEDURE?

A. GIARDINO*, I. FRIGERIO, R. GIRELLI, P. REGI, F. SCOPELLITI, C. BASSI, P. PEDERZOLI

Pancreatic Surgical Unit, Casa di Cura Pederzoli, University of Verona, Peschiera del Garda (VR), Italia

Objective: Pancreatic carcinoma has an aggressive behaviour with high rate of early progressions and poor prognosis. Only 20% of pts are resectable at diagnosis. Downstaging rate after Chemo-Radiotherapy is 8%. Survival of locally advanced pancreatic cancers (LAPC) is poor. Radiofrequency Ablation (RFA) increases tumor temperature causing cellular death. Our study on feasibility and safety of RFA in LAPC opened new approaches. Aim is to determine the role of second ablation for long survivors after RFA.
Methods: We collected all the patients with histologically proven carcinoma enrolled for the phase II pilot study, consecutively treated with surgical US-guided RFA.
Three-monthly follow-up was planned with clinical evaluation, CT scan and serum markers (Ca 19-9). Only patients with follow-up at least of 6 months were considered for the study.
Results: 147 pts were consecutively treated with RFA from March 2007 to May 2011. Median progression free survival (PFS) was 11 mts (IQR 6-15). Downstaging was achieved in 13 pts (8.8%) with an overall survival (OS) of 30 mts (IQR 26.5-36.25). 6 pts were resected whilst 8 judged technically unresectable and subjected to a 2nd RFA. Median PFS of the double ablated was 22 mts (IQR 19.25-25.5) and OS 32.5 mts (IQR 29.25-36.25). One alive with stable disease, one alive with progression and 6 are dead with a median OS of 34.5 mts (IQR 32.25-36.75). OS between double ablated and resected is not statistically significant (p=0.5).
Conclusions: Although RFA does not appear to increase the downstaging rate it plays an important role in the multimodal approach to pancreatic carcinoma. The aim needs to be addressed to local control of the progression. With this assumption RFA is an important step-over in the multimodal treatment of LAPC.

** Presenting Author*

G Chir Vol. 34 - Suppl 1, 2013 - p. 40
Supplement to n. 5/6, May-June 2013

abstracts

XXV National Congress of the "Società Polispecialistica Italiana dei Giovani Chirurghi"
13-15 June 2013, Bari, Italy

VARIANT OF TECHNIQUE IN PANCREATIC SURGERY AND SUBEVERSION OF WIRSUNG DUCT

V. FERRARO*, G. LISSIDINI, A. GURRADO, A. GIRARDI, M. CARELLA, E. D'AMBROSIO, A. FIORELLA, L.I. SGARAMELLA, M. FANELLI, M. TESTINI

Dipartimento di Scienze Biomediche ed Oncologia Umana, Unità Operativa Dipartimentale di Chirurgia Endocrina, Digestiva e d'Urgenza, Università degli Studi di Bari "Aldo Moro", Bari, Italia

Objective: Traverso-Longmire Pylorus Preserving Pancreatoduodenectomy is considered the treatment of choice for pancreatic and periampullary malignant tumors, and its indication is extended to benign disease too, such as symptomatic chronic pancreatitis, duodenal cystic dystrophy, large adenomas, diverticula and benign periampullary tumors. In spite of decreased postoperative mortality, even in high volume centres, morbidity rate is still high 30-50% and, the main complication is the pancreatojejunostomy failure. To improve the safety of this anastomosis, a modified technique of pancreato-jejunal anastomosis was proposed.
Methods: Between 2010 and 2012, at our Academic Institution, 11 patients (5 F, 6 M, mean age 67, range 57-74) underwent a modified Pylorus Preserving Pancreatoduodenectomy. A pancreato-jejunal anastomosis was performed after the Wirsung duct evagination, through a posterior two-layers and a anterior single layer pancreato-jejunostomy sutures.
Results: There was no mortality and postoperative stay was uneventful. In accordance with ISGPF Classification Scheme, no case of pancreatic fistula was observed. The mean post-operative stay was 15 days (range 12–19).
Conclusions: Evagination of the pancreatic duct can preserve from obstructive post-operative pancreatitis and even from exocrine insufficiency. Posterior reinforcement of the anastomosis, using a two-layers suture may prevent leakage during the first postoperative 48-72 hours, in which pancreatic juice is more likely to damage the posterior side of the anastomosis due to the gravity force. In our preliminary experience, this modification of the pancreato-jejunal anastomosis following pancreatoduodenectomy seems to be a safe and comfortable technique.

ROBOTIC-ASSISTED DISTAL PANCREATECTOMY COMPARED TO LAPAROSCOPIC AND OPEN APPROACH

B. IELPO, V. FERRI*, E. VICENTE, Y. QUIJANO, R. CARUSO, H. DURAN, E. DIAZ, I. FABRA, C. OLIVA, S. OLIVARES, J.C. PLAZA, V. GRANDO, C. RUBIO, U. LOPEZ

General Surgery, Sanchinarro University Hospital, San Pablo CEU, Madrid, Spagna

Objective: In the area related to pancreatic surgery, robotic procedures have not yet been evaluated against the high standard of open and laparoscopic approaches. The present study aims to compare the results between robotic distal pancreatectomy against laparoscopic and open surgery.
Methods: A retrospective study of 28 patients who were subjected to distal pancreatectomy in our center between 2008 and 2012, with three different approaches: 9 robotic, 10 laparoscopic and 9 with open surgeries.
Results: No significant differences exist between groups concerning preoperative data. Conversion rate was higher in the laparoscopic group, 40% versus 11.11% in robotics one. Significant differences exist in blood loss in the open group (mean: 3.44 units) compared to robotics (mean 0.5 units) ($P<0.001$) or laparoscopic (0 units) technique ($P<0.01$). The hospital stay was shorter in the robotic group (8.87 days) compared with laparoscopy (19.16 days) and the open group (20.44 days) ($p<0.05$). All surgical procedures resulted to be R0 with a higher mean number of resected lymph nodes in the open group (13.2), followed by robotic (12.5) and laparoscopic (5) group ($p<0.05$). Significant perioperative morbidity (Clavien III/IV) was lower in the robotic group (0%) when compared with laparoscopic (50%) and to open group (44%) ($p<0.01$). One case of pancreatic fistula was found in each group and all were treated conservatively.
Conclusions: Our study suggests that robotic distal pancreatectomy is a safe and efficient procedure as the laparoscopic and open approach.

---

* *Presenting Author*