



VIDEO ASSISTED RETROPERITONEAL DEBRIDEMENT IN HUGE INFECTED PANCREATIC PSEUDOCYST

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ABSTRACT

In recent years the incidence of acute pancreatitis has increased worldwide. Some of 85% of all patients with acute pancreatitis will recover fast, but in 15% a necrosis of the pancreatic or extra pancreatic tissue will be developed.

Two minimally invasive surgical techniques have gained wide spread acceptance: minimal access retroperitoneal necrosectomy (MARPN) and video assisted retroperitoneal debridement (VARD)

We present a case of a patient with a huge infected pancreatic pseudo cyst occupying almost the entire abdominal cavity in which a video assisted retroperitoneal debridement was performed.

MARPN and VARD are relatively simple and costless procedures which can be performed by a gastrointestinal surgeon with basic laparoscopic or endoscopic skills.

Key words: pancreatitis, cysts, intraabdominal infection, laparoscopy

INTRODUCTION

The incidence of acute pancreatitis in recent years is increasing globally. About 85% of patients with acute pancreatitis will recover quickly with analgetics and infusion therapy only. However, about 15% will develop necrosis of the pancreatic parenchyma and extrapancreatic tissues.

While behavior in the early stages of acute pancreatitis is specified, in the treatment of late complications occurring after fourth week there are still issues. Namely treatment of walled off peripancreatic collections are subject of this report. Today, it is accepted by all, that most conservative behavior is acceptable until the appearance of septic complications.

Two minimally invasive surgical techniques have gained popularity: sinus endoscopy (also known as minimal access retroperitoneal pancreatic necrosectomy-MARPN) and videoassisted retroperitoneal debridement - VARD.

CASE REPORT

We present a case of a 52 year old man operated in the past for indurative pancreatitis causing pyloric stenosis – GEA and EEA were performed. Subsequently a boost of pancreatitis with formation of acute liquid collections. Treated conservatively with the stationing of the condition. Patient was admitted in our surgery department with marked cachexia and anemic syndrome and clinical and laboratory data for sepsis based on infected pancreatic pseudocyst, occupying almost all of the abdominal cavity located on both flanks of the retroperitoneum and pelvis. Laboratory parameters showed severe hypoproteinaemia, anemia and suppression of white blood count and electrolyte abnormalities. Abdominal CT revealed huge pancreatic pseudocyst, covering both flanks of the retroperitoneum and pelvis, dislocating hollow viscera and the liver (**Figure 1 and 2**). After a short preoperative preparation the patient was operated.

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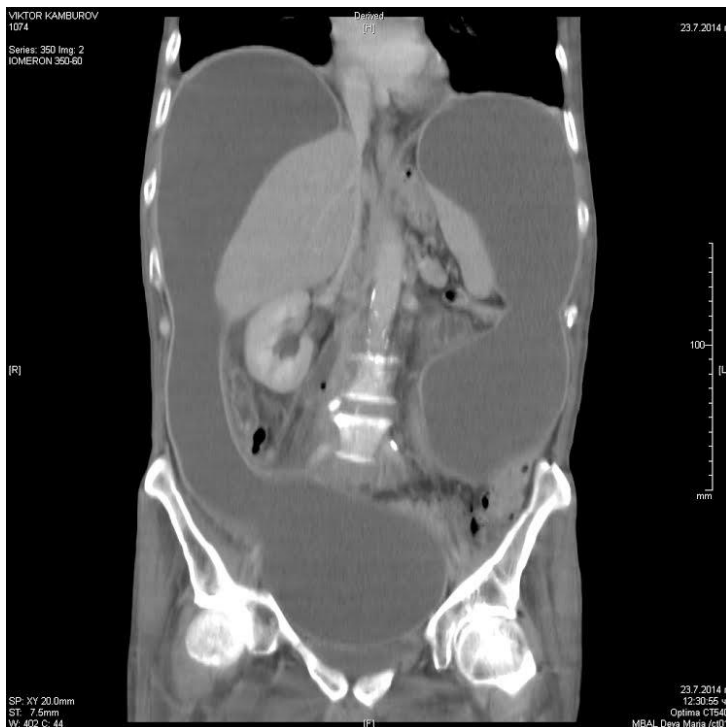
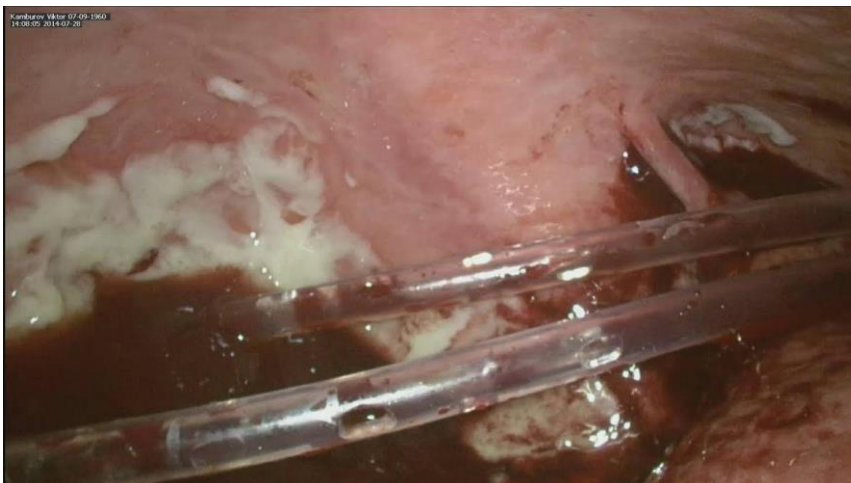


Figure 1 and 2. Preoperative CT

Concerning the poor general condition of the patient the planned operative procedure was video assisted retroperitoneal debridement. Under general anesthesia with a 3 cm subcostal transverse incision in anterior axillary line on the right the abscess cavity was reached and about five liters pus were aspirated. A 10 mm trocar was placed in the abscess cavity. CO₂ insufflation and revision of the abscess cavity with 30-degree

standard laparoscope. A second 10 mm trocar in right iliac area was placed reaching the abscess tract. The position the camera was changed and another 10mm port was placed in left iliac area and another 5 mm in left subcostal. A lavage of the cavity was performed and a tube drains were placed in left and right flanks of the retroperitoneum and in the cavum of Douglass. **(Figures 3-6)**



Figures 3-6. Intraoperative photos of VARD
Trakia Journal of Sciences, Vol. 13, Suppl. 2, 2015

Postoperative period went with continuous lavage with saline through the drainages. Control CT revealed abscess cavity behind

the right kidney, which has not been treated (**Figures 7 and 8**), and which required placing a drainage with 3 cm lumbar access.



Figure 7 and 8. Postoperative control CT showing retro renal abscess

Patient was dehospitalised in satisfactory condition.

DISCUSSION

Surgical treatment of infected pancreatic pseudocysts today has evolved from open

and bound with a high mortality rate treatments to mini-invasive approaches with significantly better results. Collective term retroperitoneoscopy today is divided mainly

into two methods- sinus tract endoscopy and video assisted endoscopic debridement [1] Sinus tract endoscopy involves intraoperative dilatation of the percutaneous drain tract followed by irrigation, lavage and suction using a nephroscope. Gambiez *et al.*[2] was the first to report this technique by using a mediastinoscope in a series of 20 patients with infected necrosis and reported a success rate of 75% with 10% mortality. Carter *et al.*[3] used a nephroscope and long-grasping forceps for debridement and continuous irrigation after serial dilation to 30F tract under fluoroscopic guidance. Multiple sessions were needed to adequately evacuate all of the necrotic debris. Horvath *et al.*[4] subsequently described the VARD technique, which involved a small subcostal incision (5 cm or less) to access the retroperitoneal necrotic collection, followed by limited blunt dissection and then placement of a port through which a videoscope was inserted. The procedure ends with lavage of the abscess cavity with saline and placement of drains.

Raraty *et al.* [5] retrospectively compared 137 patients undergoing miniinvasive retroperitoneal debridement with a cohort of patients undergoing laparotomy with debridement. Reported complications and mortality were lower in the group with minimal invasive procedure compared with patients with open debridement- 55% against 81% and 19 vs. 38%, respectively.

Limitations of mini-invasive retroperitoneal approaches are that they are not applicable to walled off pancreatic necrosis in the head and uncinata processus. Also, any technique which involves percutaneous access holds the risk of formation of pancreatic fistula.

CONCLUSION

Videoassisted retroperitoneal debridement and sinus endoscopy are relatively simple and inexpensive techniques that can be performed by a gastrointestinal surgeon with basic laparoscopic or endoscopic skills. The

presence of small incisions and adequate treatment of the abscess cavity defines the rapid recovery of patients and the low incidence of postoperative complications and mortality.

ACKNOWLEDGEMENTS

Authors declare that there is no financial or other conflict of interest.

Informed Consent: Written informed consent was obtained from the patient for the publication of this case report and any accompanying images

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