

early invasion in nearby structures or metastatic disease. As far as invasion of nearby structures is concerned, recent surgical and anesthesiological progress has pushed the usual resectability boundaries, by incorporating vascular resections and reconstructions. We present the experience of a single surgical team of the Cantacuzino Clinical Hospital with managing pancreatic head tumors, including cases with vascular invasion. From 2014 to 2022, 162 pancreatectico-duodenectomies were performed, of which 13 required vascular resection in order to achieve an R0 resection. The mean number of cases has grown to around 20 cases, with a POPF rate of 5%.

We've analised the perioperative results of pancreaticoduodenectomies including the cases associating vascular resections, which are comparable to the current literature; also, the increasing number of patients and multidisciplinary approach have led to results similar to specialised centers.

**Cuvinte cheie:** pancreas, DPC, vascular, resection

## LAPAROSCOPIC APPROACH OF ACUTE PANCREATITIS COLLECTIONS: A SERIE OF FOUR CASES



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**Introduction:** Acute pancreatitis (AP) is one of the most unpredictable pathologies of the digestive system. AP can be associated with multiple local or systemic complications. Approximately 15-20% of patients develop moderate severe or severe pancreatitis. The moderate severe form of disease is associated with local complications, as necrosis of the pancreatic and/or peripancreatic tissue and transient organ failure. One of the most common local complications in AP is the development of peripancreatic fluid collections (PFC). Proper management of PFC necessitates accurate diagnosis and treatment by a multidisciplinary team. Moreover, treatment has turned from open surgery (associated with high mortality and morbidity), therefore the latest literature shows data justifying the use of minimally invasive procedures.

**Case presentation:** We present a serie of 4 patients, with ages comprised between 54 and 70 years old with peripancreatic fluid collections, more precisely, walled-off necrosis (WON), infected WON in the lesser sac and one with ANC treated laparoscopically.

**Conclusion:** Minimally invasive procedures of PFC, especially for acute necrotic collections (ANC) include radiological, endoscopic or surgical approach. Formerly, a primary necrosectomy was the frontrunner treatment, however it is associated with high rates of mortality and morbidity. At the present moment the step-up approach management is preferred. The main and most common issue of all minimally invasive procedures is the difficult removal of the necrotic debris and the adequate drainage of the collection in one procedure.

To conclude, even though pancreatitis has an unforeseeable evolution, the minimally invasive techniques seem to be promising in the management of PFC.

**Case particularities:** This present paper presents a serie of four cases of AP complicated with PFC admitted to the Regional Institute of Gastroenterology and Hepatology, Cluj-Napoca. All cases were managed pure laparoscopically.

## REZECȚIA PANCREATODUODENALĂ – EXPERIENȚA CLINICII „NICOLAE ANESTIADI”



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**Scopul lucrării.** Analiza rezultatelor rezecției pancreatoduodenale (RPD) efectuată la pacienții spitalizați în urgență.

**Materiale și metode.** Studiu retrospectiv-prospectiv, 2016-2021, 27 pacienți la care s-a practicat operație Whipple, raport B/F=2,5:1, vârstă 58,6±8,1ani. Cauza spitalizării: icter – 19 (70,4%) și formațiune intraabdominală – 8 (29,6%). Diagnosticul a fost stabilit prin: TC – 22 (81,5%)cazuri, RMN – 3 (11,1%) și CPGRE – 12 (44,2%). S-au analizat două loturi: **lot. I** – RPD cu stentare preoperatorie și **lot. II** – RPD fără decompresie biliară preoperatorie.

**Rezultate.** Rata RPD la pacienții cu TP cefalic spitalizați în urgență a constituit 16,6%(n=27). **Lotul I** – 8 (29,6%), vârstă 57,5±6,2 ani, bilirubinemie la internare 218,8±65,7 mmol/l; stentare endoscopică efectuată în primele 5 zile de spitalizare, timpul de la decompresie până la intervenție – 12,0±6,54 zile, durată intervenției 346,5±37,8 min, zile de spitalizare 29,8±12,5 zile, inclusiv ATI – 6,0 zile. Într-un caz din cauza concreșterii TP s-a efectuat hemicolectomie dreaptă. Complicațiile p/op specifice – 4 (50%), mortalitatea p/op – 2 (25%). **Lotul II** – 19 (70,4%), vârstă 58,0±9,0 ani, bilirubinemie la internare 82,0±13,5 mmol/l, durată intervenției 322,3±55,5 min, zile de spitalizare 30,6±14,8 zile, inclusiv ATI – 8,0±3,2 zile, complicații p/op – 8 (42,1%), mortalitatea p/op – 2 (10,5%): decedat la 12 și 56 zile p/op din cauza complicațiilor septice intraabdominale.

**Concluzii.** Rata operațiilor cu viză de radicalitate la pacienții cu TP cefalică, spitalizați în urgență, rămâne joasă din cauza diagnosticului tardiv, icterul fiind cea mai frecventă cauză de adresare. Stentarea endoscopică preoperatorie este frecvent practicată pentru rezolvarea sindromul colestatic sever (bilirubinemie cca 200 mmol/l) la pacienții cu TP cefalică. Rata letalității postoperatorie în loturile studiate a fost similară; durata spitalizării și morbiditatea postoperatorie semnificativ mai elevată la pacienții supuși rezecției pancreatoduodenale.

**Cuvinte cheie.** Tumoră pancreatică, icter, decompresie biliară, rezecție pancreatoduodenală

## PANCREATICODUODENAL RESECTION - THE EXPERIENCE OF THE SURGERY CENTER “NICOLAE ANESTIADI”

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**Aim of study.** To analyze the results of pancreaticoduodenal resection(PDR) performed in patients hospitalized in an emergency.

**Materials and methods.** Retrospective-prospective study, 2016-2021, 27 patients undergoing Whipple surgery, gender ratio=2.5:1, age 58,6±8,1 years. Cause of admission: jaundice 19 (70,4%) and intraabdominal mass 8 (29,6%). Diagnosis was established by CT 22 (81,5%) cases, MRI 3 (11,1%), and ERCP 12 (44,2%). Two groups were analyzed: **group I** – PDR with preoperative stenting, and **group II** – PDR without preoperative biliary decompression.

**Results.** The rate of PDR in patients with cephalic PT hospitalized in an emergency was 16,6% (n=27). **Group I** – 8 (29,6%), age 57,5±6,2 years, bilirubin level on admission 218,8±65,7 mmol/l; endoscopic stenting performed within the first 5 days after hospitalization, time period from biliary decompression to surgery 12,0±6,54 days, duration of intervention 346,5±37,8 min, hospital stay 29,8±12,5 days, including ICU – 6 days. In one case right hemicolectomy was performed. Specific postoperative complications – 4 (50%), postoperative mortality – 2 (25%). **Group II** – 19 (70,4%), age 58±9 years, bilirubinemia on admission 82±13,5 mmol/l, duration of surgery 322,3±55,5 min, hospital stay 30,6±14,8 days, including ICU – 8±3,2 days, postoperative complications – 8 (42,1%), postoperative mortality – 2 (10,5%); died at 12th and 56th day due to intra-abdominal septic complications.

**Conclusions.** The rate of radical surgery in patients with cephalic PTs hospitalized in an emergency remains low due to late diagnosis, the jaundice being the most common cause of admission. Preoperative endoscopic stenting is frequently performed in patients with severe cholestatic syndrome (bilirubinemia>200 mmol/l). Postoperative mortality rates in the studied groups were similar; significantly higher duration of hospital stay and postoperative morbidity were registered in patients undergoing pancreaticoduodenal resection.

**Keywords.** Pancreatic tumor, jaundice, biliary decompression, pancreaticoduodenal resection

## REZULTATELE TRATAMENTULUI TUMORILOR PANCREATICE CEFALICE SPITALIZATE ÎN URGENȚĂ



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**Scop.** Analiza rezultatelor tratamentului chirurgical (paliativ și rezecțional) la pacienții cu tumori pancreaticice (TP) cefalice spitalizați în urgență.

**Materiale și metode.** Studiu retrospectiv-prospectiv, 2016-2021, 185 pacienți cu TP, B:F/1:1, vârstă medie 62,8±12,7 ani. Adresarea a fost determinată de icter în 121 (65,5%) cazuri, formătune intraabdominală – 41 (22,2%), abdomen acut – 23 (12,4%). Diagnosticul s-a stabilit: la 147 (79,5%) – prin TC; la 14 (7,6%) – prin RMN și la 102 (55,1%) – la CPGRE. În 163 (88,1%) cazuri TP era localizată cefalic, în 22 (11,9%) – corporeo-caudal (excluși din studiu). În 14,7% cazuri (24 pacienți cu tumoră cefalică) s-a refuzat orice procedură terapeutică. Pacienții s-au repartizat în trei loturi: lot.I – stentare biliară la CPGRE sau transparietohepatică (87), lot. II – derivație bilio-digestivă (25), lot. III – rezecție pancreaticoduodenală (27).

**Rezultate.** Lotul I – 87 (62,6%) cazuri, vârstă m=65,6±11,7 ani, bilirubinemia m=222±122 mmol/l, durata spitalizării m=10,7±6,4 zile, mortalitatea p/op – 9 (10,3%). Lotul II – 25 (18%) cazuri, vârstă m=61,2±10,9 ani, bilirubinemia m=86,0±17,0 mmol/l, durata spitalizării m=21,2±10 zile, mortalitatea p/op – 4 (16%). Lotul III – 27 (19,4%) pacienți, vârstă m=57,9±8,1ani, bilirubinemia m=127±53 mmol/l, 8 (29,6%) cazuri au fost stenatați preoperator (bilirubinemia m=218,8±65,7 mmol/l), durata spitalizării m=30,2±13,8 zile, mortalitatea p/op – 4 (14,8%).

**Concluzii.** Examenul imagistic (TC cu angiografie și/sau RMN) este de prima intenție în diagnosticul și stabilirea tacticii chirurgicale pentru TP. Stentarea căilor biliare este o soluție frecvent aplicată pentru rezolvarea icterului în TP cefalice. Rata operațiilor rezecționale cu viza de radicalitate rămâne sub limitată mondială raportată din cauza diagnosticului tardiv și simptomatologiei nespecifice.

**Cuvinte cheie.** Tumora pancreatică, decompresie minim-invazivă, derivație bilio-digestivă, rezecție pancreatică

## RESULTS OF THE TREATMENT OF PANCREATIC CEPHALIC TUMOURS HOSPITALISED THROUGH AN EMERGENCY

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**Aim of study.** To analyze the outcomes of surgical treatment (palliative and radical) in patients with cephalic pancreatic tumors (PTs) admitted to hospital through an emergency.

**Materials and methods.** Retrospective-prospective study, 2016-2021, 185 patients with PT, gender ratio 1:1, mean age 62,8±12,7 years. Cause of admission: jaundice 121 (65,5%) cases, intraabdominal mass 41 (22,2%), and acute abdomen 23 (12,4%). Diagnosis was established by CT in 147 (79,5%), MRI 14 (7,6%), and ERCP 102 (55,1%). In 163 (88,1%) cases PT was localized cefalic, in 22 (11,9%) - corporeal-caudal (excluded from the study). In 14,7% cases (24 patients with cefalic tumor) any therapeutic procedure was refused. Patients were divided into three groups: group I – minimally invasive decompression (87), group II – biliodigestive bypass (25), group III – pancreaticoduodenal resection (27).

**Results.** Group I – 87 (62,6%) cases, age m=65,6±11,7 years, bilirubin level m=222±122 mmol/l, hospital stay m=10,7±6,4 days, mortality – 9 (10,3%). Group II – 25 (18%) cases, age m=61,2±10,9 years, bilirubin level m=86±17 mmol/l, hospital stay m=21,2±10 days, mortality – 4 (16%). Group III – 27 (19,4%) patients, age m=57,9±8,1 years, bilirubin level m=127±53 mmol/l, in 8 (29,6%) cases preoperative stenting was performed (bilirubin level m=218,8±65,7 mmol/l), hospital stay m=30,2±13,8 days, mortality – 4 (14,8%).

**Conclusions.** Imaging examinations (CT with angiography and/or MRI) are the first option in diagnosis and determining surgical tactics for PTs. Bile ducts stenting is commonly applied in patients with jaundice. The rate of radical surgery remains below the reported world rate because of late diagnosis and non-specific symptoms.

**Keywords.** Pancreatic tumor, minimally invasive decompression, biliodigestive bypass, pancreaticoduodenal resection