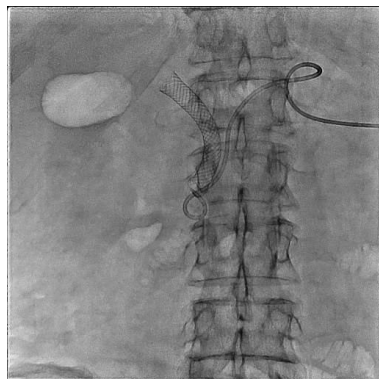


Spectrum of novel second-line interventions after pancreatic duct percutaneous drainage

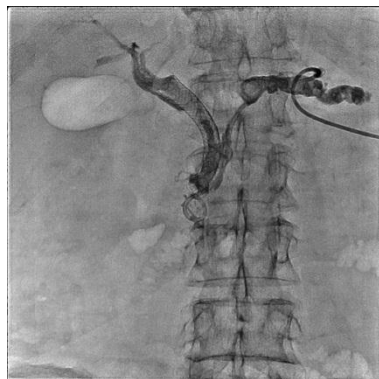
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Purpose Pancreatic duct (PD) novel image-guided recanalization and endoluminal biopsy techniques using mature percutaneous pancreatic duct are presented

Materials and Methods 39 patients (pancreatic cancer – 18, chronic recurrent pancreatitis – 21) underwent in total 48 percutaneous second-line procedures after preliminary PD drainage, performed because of PD dilation induced pancreatitis and/or PD dilation induced pancreatic atrophy related diabetes. Balloon Assisted Percutaneous Descending Litholapaxy (BAPDL – PD stones pushing down in duodenum by balloon) – 18, stricture endoluminal RFA&stenting – 12, stricture stenting – 9, balloon dilatation – 6, endoluminal biopsy – 3 procedures. All procedures were performed under fluoroscopy guidance after appropriate diameter introducer sheath positioning in PD via mature percutaneous drainage track. Endoluminal RFA was performed using novel (either 5 or 8Fr diameter) RF device, metal stent placement and balloon dilatation was fulfilled by conventional guidewire technique using 6 to 8 mm diameter devices. Endoluminal biopsy was performed using 5Fr diameter forceps device. After PD recanalization safety drainage catheters were repositioned to maintain access for follow-up prior to removal.



Pt.A. Biliary stenting and PD external-internal drainage



Pt.A. Contrast injection opacifies dilated upstream PD



Pt.A. Metal stent has been implanted in PD strictured segment



Pt.A. PD patency has been restored completely



Pt.B. Stone in PD distal segment (arrow)



Pt.B. Balloon dilatation



PtB. After stone pushing down in duodenum

Results Second-line procedures were fulfilled in 45 (93.8%) of 48 attempted cases. In 1 pancreatic cancer and 1 PD stones case the wire could not be conducted into duodenum; in 1 PD stones case the stone pushing efforts were unsuccessful. In 2 cases stents were implanted after successful BAPDL procedure because follow-up revealed PD restriction. In all technical success cases the clinical result has been achieved. Endoluminal biopsy enabled to get tissue material; all patients tolerated the procedures well, there was no 30-day or hospital mortality. There were no observed technique specific complications, such as hemorrhage, duct of vessel perforation or infection, including transgastric route cases.

Conclusion The spectrum of second-line percutaneous procedures using PD mature drainage track is safe and effective; it should be widely implemented in clinical practice