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## **Clinical Relevance Of Post-pancreatectomy Acute Pancreatitis And Impact On Occurrence Of Pancreatic Fistula: Serum Hyperamylasemia And Pancreatitis Do Not Predict Clinically Relevant Pancreatic Leak**

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**Background** : Post-pancreatectomy acute pancreatitis (PPAP) is being increasingly recognized to have an impact on the clinical course of the patients after pancreateo-duodenectomy (PD). The present study was conducted to assess the impact of Postoperative hyperamylasemia (POH) and PPAP on the occurrence of pancreatic fistula (PF) and on the clinical outcomes of patients after PD.

**Methods** : Medical records of patients undergoing PD between January 2021 to December 2021 were reviewed. Authors perform pancreatic POH was defined as an elevation in serum amylase levels over the upper baseline limit ( $\geq 80$ U/L) on post-operative days 1 and 3. PPAP was defined as acute pancreatitis satisfying following criteria: POH, any deviation from normal clinical course, and pertinent radiological features. PF was graded as per the ISGPS grades (no leak and grades A to C). ISGPS grade B and C leaks were clubbed under clinically relevant pancreatic leak.

**Results** : Findings from 74 patients who underwent PD were included in the study. Amongst these, complete data with respect to post-operative biochemical and radiological parameters was available for 59 patients. 41 patients (55.4%) had POH and 18 (24.3%) had normal serum amylase levels. PPAP was observed in 29 patients (39.2%). Prevalence of PF (as per ISGPS grading) was as: No leak – 30(40.5%), grade A – 15(20.3%), grade B – 13(17.6%), grade C – 9(12.2%). POH was predictive of drain hyperamylasemia on day 7 ( $p=0.035$ ). However, POH did not have any statistically significant impact either on prevalence of ISGPS grades of PF (0.220) or on development of any clinically relevant pancreatic leak ( $p=0.201$ ). PPAP had a statistically significant impact on the occurrence of (day 7) drain hyperamylasemia ( $p=0.003$ ) but had no significant impact on occurrence of clinically relevant leak ( $p=0.229$ ). No significant prolongation in hospital stay was seen with occurrence of either POH ( $p=0.601$ ) or PPAP ( $p=0.506$ ).

**Conclusions** : POH and PPAP are predictive of drain hyper-amylasemia but neither of them predict any significant change in clinical course of patients after PD. Biochemical leaks (grade A pancreatic leak) may just be an extended manifestation of serum hyper-amylasemia.

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