

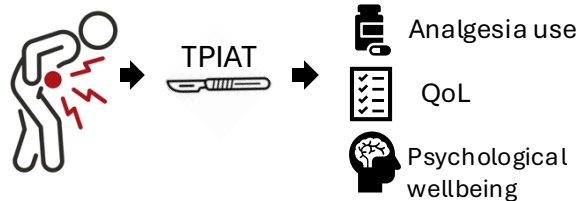
Improvement in Quality of Life Measures following Total Pancreatectomy and Auto-Islet Cell Transplant for Chronic Pancreatitis: A Single Centre early UK experience and Service Evaluation

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Background

Chronic pancreatitis affects 14,000 people in the UK. TP-IAT¹, commissioned at four NICE centres², is offered for refractory or hereditary cases to relieve pain and reduce diabetes risk. Current evidence for quality-of-life outcomes is limited³. This study provides the first UK cohort systematically assessing patient-reported quality of life, psychological wellbeing, and analgesic use after TP-IAT.



Methods

Design: Single-centre retrospective cohort study of adults undergoing TP-IAT for chronic pancreatitis. Churchill Hospital, Oxford University Hospital (Feb 2017–Mar 2025)

Data collection: Primary outcomes were quality of life (SF-36)⁴, anxiety (GAD-7)⁵, and pain catastrophizing scale (PCS)⁶; scores, collected through pre- and postoperative questionnaires

Secondary outcomes: Opiate use and intra-operative details collected from secure patient record documentation

Data Analysis: Continuous data presented as mean $\pm$ SD or median (IQR); categorical data as counts and percentages. Outcomes compared pre- and postoperatively with a paired T Test

Results



35 patients underwent TP-IAT

Main indications: idiopathic pancreatitis (54%), hereditary pancreatitis (40%), with pathogenic genetic variants in 43%.

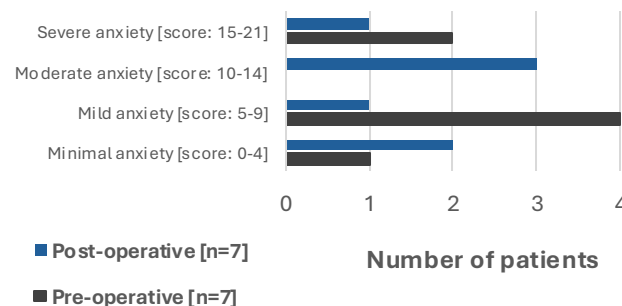
Mean islet yield: 252,645 (range 35,000–730,000); 35% also had splenectomy.

7 patients completed both pre- and postoperative questionnaires



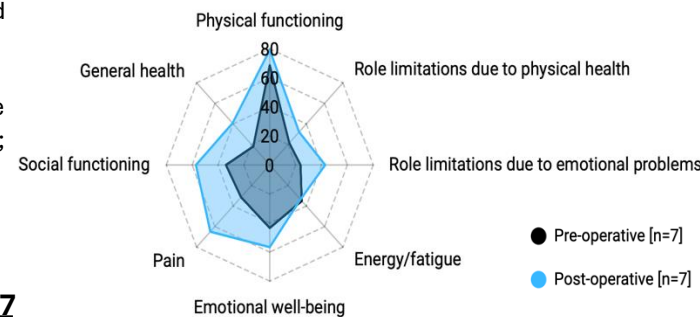
Anxiety (GAD-7): no significant change (mean difference -0.43, $p=0.68$; categorical severity $p=0.29$).

Average General Anxiety Disorder-7 (GAD-7) Scores



SF-36: significant improvement in pain (31.4→65.0, $p=0.01$) and general health (18.0→40.7, $p=0.02$); other domains increased but not significant (physical functioning $p=0.39$, emotional well-being $p=0.18$, social functioning $p=0.17$, role-physical $p=0.48$, role-emotional $p=0.46$, energy/fatigue $p=0.79$).

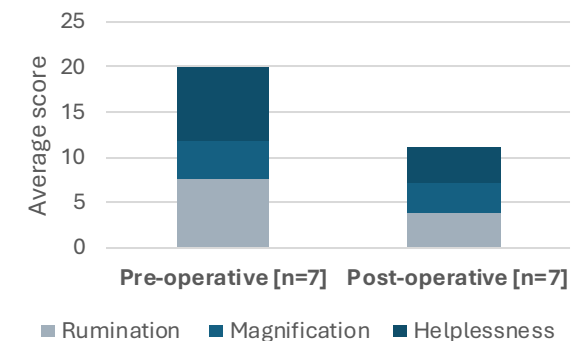
Average Short Form (SF-36) Health Domain Scores



Pain catastrophizing (PCS): mean score reduced (20.1→11.1); significant decreases in rumination (7.6→3.9, $p=0.015$) and helplessness (8.3→4.0, $p=0.017$); magnification non-significant (4.1→3.3, $p=0.43$). Clinical catastrophizing (≥ 30) dropped from 2 to 0 patients post-op.

Postoperatively, patients not using opiates increased from 3 to 21 ($p < 0.01$)

Average Total Pain Catastrophizing Scale (PCS) Scores



Discussion

TP-IAT significantly reduces pain and opioid use, improving quality of life in chronic pancreatitis patients. Despite this, psychological symptoms often persist, highlighting the need for integrated psychological support alongside surgery. Limitations include a small sample size and variation in follow-up timing. Future recommendations include standardising psychological assessments, refining quality-of-life and pain measurement tools, and conducting multicentre studies with longer follow-up

References:
[1] Vallance AE, Wilson CH, Dennison A, et al (2015) Total pancreatectomy and islet autotransplantation for chronic pancreatitis (Protocol). Cochrane Database of Systematic Reviews, [2] Hudson A, Bradbury L, Johnson R, et al The UK Pancreas Allocation Scheme for Whole Organ and Islet Transplantation. Am J Transplant. [3] Chinnakotla S, Bellman GJ, Vook D, et al Intraportal Islet Autotransplantation Independently Improves Quality of Life After Total Pancreatectomy in Patients With Chronic Refractory Pancreatitis. Ann Surg. 2022 [4] Chinnakotla S, Radosevich DM, Dunn TB et al Long-term outcomes of total pancreatectomy and islet auto transplantation for hereditary/genetic pancreatitis. J Am Coll Surg.