

Nutritional support after pancreatoduodenectomy: Do some patients receive TPN unnecessarily?

¹TB Russell, ¹PL Labib, ¹P Murphy, ²RAW Study Collaborators, ¹S Aroori • ¹University Hospitals Plymouth NHS Trust, ²Various • s.aroori@nhs.net

Background:

- An early oral diet is recommended in patients who undergo uncomplicated pancreatoduodenectomy (PD)
- The nutritional management of PD patients is known to be highly variable
 - Some centres give post-op parenteral nutrition (PN) routinely
 - This is not without risk and is unnecessary

Aims:

- To determine the proportion of PD patients that received post-op nutritional support (NS)
- To describe the variations in support
- To investigate whether NS correlated with morbidity

Methods:

- Data extracted from the Recurrence After Whipple's (RAW) study (2012-2015)
 - Retrospective cohort study (29 centres, 8 countries)
 - PD performed for confirmed malignancy (n=1484)
- Patients who received post-op NS were compared to those who did not, and those who experienced major morbidity were compared to those who did not

45% of patients received post-op NS

- Enteral only: 44%
- Parenteral only: 35%
- Enteral and parenteral: 21%

Tab. 1: Type of post-op NS received.



PSGBI
AGM
2022

(A)	Major morbidity	No major morbidity	p-value
n	226 (17%)	1097 (83%)	N/A
Post-op NS	159 (70%)	442 (40%)	<0.00001*
EN only	39 (17%)	227 (21%)	0.274
PN (+/- EN)	112 (50%)	215 (20%)	<0.00001*

(B)	Comp. a/w post-op NS	No comp. a/w post-op NS	p-value
n	454 (34%)	869 (66%)	N/A
Post-op NS	297 (65%)	304 (35%)	<0.00001*
EN only	93 (21%)	173 (20%)	0.829
PN (+/- EN)	203 (45%)	131 (15%)	<0.00001*

Tab. 2: (A) Major morbidity vs none, (B) Comp. typically associated with PN vs none.

Results:

- Correlated with post-op NS:
 - BMI <18.5 (p=0.03)
 - Pre-op biliary stent (p=0.009)
 - Low pre-op albumin (p=0.009)
 - Left theatre with NG tube (p=0.0004)
 - Post-op pancreatic fistula (p<0.0001)
 - Delayed gastric emptying (p<0.0001)
 - Unplanned return to theatre (p<0.0001)
- Correlated with PN:
 - Major morbidity (p<0.0001)
 - Post-op pancreatic fistula (p<0.0001)
 - Unplanned return to theatre (p=0.0003)
 - 90-day mortality (p=0.003)
- **215 patients (20%) did not experience major morbidity, yet they still received PN**
- **131 patients (15%) did not develop a post-op complication typically associated with PN, yet they still received PN**

Conclusions:

- A considerable number of patients who had an uneventful recovery received PN
- PN is not without risk and should be reserved for those who are unable to take an oral diet