

**NHS BLOOD AND TRANSPLANT
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE**

PANCREAS ADVISORY GROUP

ORGAN DAMAGE

INTRODUCTION

- 1 At the April 2017 meeting there was an action to investigate the level of damage reported for organs intended for whole pancreas transplantation. This paper reports on the information reported on the HTA B form on grade of surgical damage for pancreases that were accepted for whole pancreas transplantation.
- 2 Information reported on damage and quality from the 'Pancreas Damage' sections by the retrieval team and recipient transplant centre of the Deceased Donor Pancreas Information (DDPI) Form have also been investigated.

DATA

- 3 Data on 325 donors between 1 April 2018 and 31 March 2019 whose pancreas was taken and accepted for whole pancreas transplantation were analysed from the UK Transplant Registry (UKTR).

RESULTS

- 4 Of the 325 donor pancreases accepted, 174 (54%) were transplanted. **Table 1** shows the grade of damage reported on the HTA B form by whether or not the pancreas was transplanted. 50 (15%) had a grade of surgical damage reported on the HTA B form, with 28 (56%) of these reporting 'severe' damage. The recorded descriptions relating to reported surgical damage are provided in Table A in the Appendix.

Table 1 Pancreas damage reported on HTA B form for a pancreas that was accepted for a whole pancreas patient, 1 April 2018 - 31 March 2019			
Grade of surgical damage reported on HTA B form	Not		Total
	Transplanted	Transplanted	
None	148	95	243
Mild = no surgical repair required	11	2	13
Moderate = surgical repair required to make usable	7	2	9
Severe = not used due to damage	0	28	28
Not Reported = organ not received at accepting centre	0	13	13
Missing form	8	11	19
Total	174	151	325

- 5 Of the nine with 'moderate' surgical damage, seven were transplanted and reported as having no significant impact on the recipient's health. Of the two pancreases that were not transplanted, neither were reported as having a

significant impact on the recipient’s health. In both cases capsular damage was the main reason reported for not transplanting.

- 6 For the 28 pancreases that had ‘severe’ surgical damage reported, the sections relating to organ damage/quality reported by the retrieval team and the recipient transplant centre on the Deceased Donor Pancreas Information (DDPI) form were also investigated. Twenty five (89%) forms were completed and returned by the retrieval team and of these, ten also had the section completed by the recipient centre.
- 7 Of the ten DDPI forms that had both sections completed seven had reported at least one type of damage/quality issue on the recipient transplant centre section and six had at least one type of damage/quality issue reported on the retrieval section. **Table 2** shows the comparison in damage/quality reporting between the two sections for the ten recipients.

Table 2 Comparison between the retrieval and recipient transplant centre sections of the DDPI form

Pancreas	Damage/quality reported on Recipient section	Damage/quality reported on Retrieval section
1	None reported	None reported
2	Parenchymal damage and "Accessory (R) hepatic arising from SMA"	"A RHA coming from IPDA agreed with surgeon cut as proximal to IT organ"
3	None reported	None reported
4	Capsule Damage	Capsule Damage
5	Capsule and Parenchymal Damage	None reported
6	SMA Hepatic Artery and Capsule Damage	SMA Hepatic Artery damage
7	SMA Hepatic Artery and Capsule Damage	SMA Hepatic Artery damage
8	Fatty Pancreas	Fatty pancreas and "vein cut short to smu/sv cadurvce. fatty - photos sent"
9	Arterial supply damage, capsule damage and "Splenic vein cut @ 3 places 2 stitched with splenic artery. splenic artery dissected very distally portion of splenic artery is missing"	"sharp cut to splenic vein partial circumference"
10	None reported	None reported

ACTION

- 8 Members are reminded that if the accepting centre receive a pancreas that has severe surgical damage then an incident must be raised via the ODT website [link](#). Only by raising an incident can the data be monitored and acted upon. Members are also reminded of the importance of the completion and return of the HTA B and the DDPI forms to ODT Information Services.
- 9 Members are asked to consider the information presented and make any recommendations as appropriate.

Table A below presents the description provided for the 50 pancreases that had reported surgical damage on the HTA B form. The highlighted rows show the 18 pancreases that were transplanted.

Table A Description of the damage for the 50 pancreases that were accepted for whole organ transplantation and had surgical damage reported on the HTA B form	
Surgical grade reported	Description of the organ damage
Mild	MESENTERY NOT STAPLED & DUODENUM END OVERSEWN DUE TO INCOMPLETE STAPLE FIRE
Mild	TEAR, SMALL CUT IN PORTAL VEIN
Mild	SHORT COMMON ILIAC ARTERY LIMB TO USE FOR THE 'Y' GRAFT
Mild	CAPSULE OPENED, CONTAMINATION FROM OESOPHAGUS
Mild	PROXIMAL DUODENAL STAPLES LINE OPEN
Mild	PARENCHYMAL/CAPSULE BREACH UPPER PART HEAD OF PANCREAS
Mild	2CM PARENCHYMAL HEMATOMA MID BODY
Mild	PORTAL VEIN VERY SHORT RESULTING IN VERY DIFFICULT IMPLANT. CAPSULAR TEAR
Mild	CAPSULAR TEARS ON HEAD & BODY
Mild	DONOR DUODENUM NOT FLUSHED - U.W.
Mild	TRANSECTION OF SMALL VESSEL (-4MM) CLOSED > PANCREAS - NOT FEESIBLE TO REPAIR. SIGNIFICANCE UNCERTAIN.
Mild	3mm tear to tail. Fatty and haemorrhagic
Mild	SPLenic ARTERY NOT MARKED LEAK FROM DUODENAL STAPLE SITE
Moderate	MAKING SUTURE IN THE SMA CAUSED PARTIAL INTIMAL DISSECTION
Moderate	CUT TO SPLenic VEIN
Moderate	Y GRAFT EIA/CIA/IIA TORN TRACTION INJURY
Moderate	1. 'Y' GRAFT VESSELS (ILIAC) DAMAGED AT THE JUNCTION, THEREFORE NOT USED AS 'Y' GRAFT. INDIVIDUAL SMA/SA EXTENSION DONE, AND 2 SEPARATE ANATOMOSES TO RIGHT COMMON ILIAC ARTERY DONE. 2. PORTAL VEIN CUT SHORT (<1CM) THEREFORE DISSECTED TO GAIN LENGTH. 3. SPLenic ARTERY DISSECTED FROM ITS BED FOR 2-3CM.
Moderate	CAPSULAR TEARS AROUND SUPERIOR MESENTERIC VEIN
Moderate	VARIOUS INJURIES TO SPLenic VEIN / IMV CONFLUENCE REQUIRING VEIN PATCH REPAIR
Moderate	DUODENAL SEVERAL TEAR (=3CM)
Moderate	CUT TO SPLenic VEIN CAPSULAR DAMAGE TO HEAD
Moderate	capsular damage
Severe	1) DAMAGE TO DUODENUM 2) CAPSULAR TEAR OF PANCREAS BODY 3) INJURY TO SPLenic ARTERY
Severe	NON PERFUSED HEAD OF PANCREAS
Severe	SIGNIFICANT CAPSULAR TEAR AROUND HILUM
Severe	TRANSECTION OF THE UNCINATE PROCESS WHICH EXPOSURE OF SNV & SPLenic VEIN
Severe	NO FLUSH THROUGH THE VEIN
Severe	> PARENCHYMAL INJURY > DUODENAL STAPLE LINE BREACHED

Table A Description of the damage for the 50 pancreases that were accepted for whole organ transplantation and had surgical damage reported on the HTA B form	
Surgical grade reported	Description of the organ damage
Severe	CAPSULAR TEAR IN POSTERIOR SURFACE OF HEAD, ON A BACKGROUND OF A HARD NODULAR ORGAN.
Severe	> TEAR TO PANCREATIC CAPSULE > FATTY PANCREAS
Severe	TRACTION INJURY : LONGITUDINAL IN MID-PART OF PANCREAS, APPROXIMATELY 50% OF CIRCUMFERENCE
Severe	SPLENIC ARTERY STRIPPED OFF BODY OF PANCREAS AND CUT SHORT
Severe	PARENCHYMAL INJURY
Severe	CAPSULAR TEAR > PARENCHYMAL INJURY
Severe	1) SEVERAL CAPSULAR TEARS 2) ISSUE WITH BLOOD SUPPLY ? NO OUTFLOW (COMPROMISED)
Severe	CAPSULAR TEAR & PARENCHYMAL DAMAGE TO PANCREATIC TAIL AFFECTING 1/3 OF THE PANCREAS
Severe	CAPSULAR TEAR ON THE PANCREAS
Severe	NOT DAMAGE, BUT DUODENAL STAPLE LINE LEAKAGE OF BOWEL CONTENTS
Severe	PANCREAS UN-USABLE
Severe	PARENCHYMAL INJURY CAPSULAR TEAR
Severe	SPLENIC ARTERY CUT SHORT WITH 5CM DISTANCE BETWEEN CUT END AND SMA. Y-GRAFT ONLY JUST ADEQUATE FOR VASCULAR RECONSTRUCTION. HOLE IN DUODENAL BRANCH OF PORTAL VEIN.
Severe	EXVACATIONS IN PANCREAS PARENCHYME WITH LEAKING FROM RV
Severe	SMA DISSECTION AND IPDA BRANCH CUT
Severe	NO PORTAL VEIN. DIVIDED AT CONFLUENCE OF SMV & SPLENIC VEIN. CAPSULAR TEAR. MARGINAL DONOR AND ADDING DAMAGE - NOT TRANSPLANT SUITABLE.
Severe	portal vein cut too short during retrieval
Severe	Sharp cut across splenic vein. Splenic vein dissected very distally
Severe	Staple line across duodenum failed. Contamination of transport fluid
Severe	Staple line on Duodenum failed , gastric contents leaked
Severe	capsule stripped
Severe	RETRIEVAL DISECTION AT JUNCTION SPLENIC AND PORTAL VEIN. SOFT TISSUE / PANCREATIC TISSUE DISECTED AT SPLENIC PORTAL JUNCTION