VANDERBILT UNIVERSITY MEDICAL CENTER
MULTIDISCIPLINARY SURGICAL CRITICAL CARE

GUIDELINES AND PATHWAYS OF CARE
FOR POSTOPERATIVE LIVER TRANSPLANT PATIENTS

Purpose: Postoperative liver patients are often dynamic with changing hemodynamic and resuscitative needs. In light of this, communication between the SICU team and the Hepatobiliary Surgery (HBS) team is paramount in the postoperative period for liver transplant patients. In an effort to improve communication between these two teams, the nurses, and other healthcare professionals, these pathways of care were created for the two phases of the postoperative period. Phase 1 is the immediate postoperative periods (approximately hours 0-12) and Phase 2 (approx. hours 12-72). These pathways will be used by the SICU team, nursing, and HBS to identify the goals of care, orders to be entered, and what has been completed by each team. These pathways of care will be used for liver transplant patients without on-going bleeding, who are hemodynamically stable, and progressing as expected in the postoperative period. Should a patient not fall into these categories, then the SICU and HBS teams are to communicate at the fellow/chief level in person to decide upon the appropriate care guidelines.

These pathways of care will be posted on the patient's door with colored markers as indicated on the pathway "posters" (see examples below). Each team is assigned a color for orders, goals of care, and those things that have been completed. This is an iterative process between the SICU team and HBS team with changes to be made as agreed upon by these two teams.

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Hours 0- 24

ICU Admission:
- ☐ Labs q6h x 24 hours
- ☐ CXR

Goals of Care:

Neuro:
- ☐ Goal RASS
- ☐ Wean Sedation if hemodynamically stable

Cardiovascular:
- ☐ MAP > 60
- ☐ Mean PAP < 30
- ☐ Cardiac Index > 1.5
- ☐ Monitor volume status (EDVI > 80, CVP >8 and < 20)
- ☐ Monitor UOP (> 0.5cc/kg/hr)

Respiratory:
- ☐ Ventilator per SICU protocol
- ☐ Spontaneous Breathing Trial if HDS
- ☐ Consider extubation if HDS

FENGI and Endocrine:
- ☐ SICU Electrolyte Replacement Protocol
- ☐ MIVF - D5 1/2 NS @ calculated requirement (4:2:1)
- ☐ SICU insulin drip protocol
- ☐ Consider restarting home insulin therapy

ID:
- ☐ Immunosuppression per HBS team
- ☐ Perioperative Antibiotics x 48 hours

Other Goals of Care:
- ☐
- ☐
- ☐

Transfusion Triggers	
Hematocrit	(Default< 24)
INR	(Default> 2.5)
Platelet	(Default < 20)

When to Notify Primary Team
Vasopressors are started
Drop in PCV > 5
Unanticipated Blood Transfusion
Mental Status Change
Increasing Lactate

Color Code
ICU Day Team - Blue
ICU Night Team - Green
Primary Team - Black
Nursing - Purple
Critical Communication - Red

	OR	0	2	4	6	8	10	12	14	16	18	20	22	24	Total
Crystalloid															
Colloid															
pRBC															
FFP															
Platelets															
JP #1															
JP #2															
JP #3															
UOP															
NGT															

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Hours 24 -48

Goals of Care:

Neuro:

- [ ] Goal RASS
- [ ] Transition to Dilaudid PCA after extubation
- [ ] Start PO Lortab after extubation

Cardiovascular:

- [ ] MAP > 60
- [ ] Monitor Volume Status (UOP> 0.5cc/kg/hr, CVP > 8)

If no longer on Pressors:

- [ ] Discontinue PAC
- [ ] Restart home Beta Blocker (only if for cardiac indication)

If on Pressors:

- [ ] Mean PAP < 30
- [ ] Cardiac Index > 1.5

Respiratory:

- [ ] Wean Ventilator to extubation per SICU Protocol if HDS

FEN/Renal:

- [ ] SICU Electrolyte Replacement Protocol
- [ ] MIVF - D5 1/2 NS
- [ ] Evaluate for the need to start diuresis
- [ ] Monitor for signs of AKI & renal dose medicines

GI:

- [ ] Discuss diet with primary team
- [ ] Colace 100mg BID
- [ ] Nutrition Consult
- [ ] Change meds from IV to PO
- [ ] Start Pepcid

ID:

- [ ] Perioperative Antibiotics x 48 hours
- [ ] PCP Prophylaxis
- [ ] Acyclovir 400 mg PO BID x 7 days

Endocrine:

- [ ] Transition to SSI once extubated
- [ ] Discontinue insulin drip
- [ ] Restart home insulin regimen if indicated

Prophylaxis/Activity:

- [ ] Heparin 5000 units SQ per HBS team
- [ ] OOB to chair/ambulate with assistance once extubated
- [ ] PT/OT Consult

Immunosuppression: PER HBS

- [ ] Mycophenolate 1 gram PO BID
- [ ] Prednisone taper
- [ ] Tacrolimus per primary team

Lines:

- [ ] Consider removal of A-line x 2
- [ ] Consider removal of MAC and changing to TLC

When to Transfer to 7T3
HDS with no active bleeding and stable PCV, INR, Platelet Count
Extubated
Stable Oxygen Requirement
Able to clear secretions
Discontinuation of invasive monitoring
Nutrition plan initiated
Non-combative/cooperative

House Keeping
☐ Transition all Labs to Daily
☐ Daily Weights
☐ Strict I/O'S
☐ Consider Foley Removal
☐ D/C NGT once extubated

Transfusion Triggers	
Hematocrit	(Default< 24)
INR	(Default > 2.5)
Platelets	(Default< 20)

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ICU Night Team - Green
Primary Team - Black
Nursing - Purple
Critical Communication - Red

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Hours 48-72

Goals of Care:

Neuro:
- ☐ Goal RASS
- ☐ Dilaudid PCA
- ☐ Lortab PRN

Cardiovascular:
- ☐ MAP > 60
- ☐ Monitor Volume Status (UOP> 0.5cc/kg/hr, CVP > 8)
- ☐ Consider amlodipine 2.5 -10mg q day for SBP >160

Respiratory:
- ☐ Supplemental Oxygen for SpO_2 > 92%
- ☐ Splinting with pillow to assist with cough
- ☐ Pulmonary Toilet including IS/DB/Cough q1h

FEN/Renal:
- ☐ SICU Electrolyte Replacement Protocol
- ☐ Consider saline lock if tolerating PO
- ☐ Evaluate for the need to start diuresis
- ☐ Monitor for signs of AKI & renal dose medicines

GI:
- ☐ Discuss diet with primary team
- ☐ Colace 100mg BID
- ☐ Change meds from IV to PO
- ☐ Pepcid PO

ID:
- ☐ PCP Prophylaxis
- ☐ Acyclovir 400 mg PO BID x 7 days

Endocrine:
- ☐ Transition to SSI once extubated
- ☐ Discontinue insulin drip
- ☐ Restart home insulin regimen if indicated

Immunosuppression: PER HBS
- ☐ Mycophenolate 1 gram PO BID
- ☐ Prednisone taper
- ☐ Tacrolimus per primary team

Prophylaxis/Activity:
- ☐ Heparin 5000 units SQ per HBS team
- ☐ OOB to chair once extubated
- ☐ Ambulate with assistance BID
- ☐ PT/OT Consult

Lines:
- ☐ Consider removal of A-line
- ☐ Consider removal of MAC and change to TLC

Other Goals of Care:
- ☐ Transfer to 7T3 today if meets criteria
- ☐
- ☐

When to Transfer to 7T3
HDS with no active bleeding and stable PCV, INR, Platelet Count
Extubated
Stable Oxygen Requirement
Able to clear secretions
Discontinuation of invasive monitoring
Nutrition plan initiated
Non-combative/cooperative

Housekeeping
☐ Transition all Labs to Daily
☐ Daily Weights
☐ Strict I/O'S
☐ Consider Foley Removal
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Transfusion Triggers	
Hematocrit	(< 24)
INR	(> 2.5)
Hematocrit	(< 24)

Color Code
ICU Day Team - Blue
ICU Night Team - Green
Primary Team - Black
Nursing - Purple
Critical Communication - Red

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