PERIOPERATIVE CARE OF THE PATIENT WITH A SOLID ORGAN TRANSPLANT

Patients with solid organ transplants are living longer and frequently undergo surgery that is unrelated to their transplant. Often these patients are many years out from transplantation, and are primarily being managed by primary care providers. In most cases these patients still require specialty care, but internists are expected to have a working knowledge of care of such patients.

<u>Preoperative evaluation</u>

- Time since transplant
- Status of transplanted organ:
  - Current function (e.g. LFTs, INR, plts, creatinine, last biopsy for liver transplant).
  - Recurrent disease in the transplanted organ (example: hepatitis C).
  - Prior episodes of rejection and increased immunosuppression.
  - We recommend the appropriate service (e.g. very recent transplants—transplant surgery, liver transplants—hepatology, kidney transplants—transplant renal service, lung transplants—pulmonary) evaluate the patient preoperatively for complete assessment of the transplanted organ.
- Assess immunosuppressive regimen and plan for perioperative management, especially if patients are expected to be NPO.
- Assess chronic corticosteroid use—maintenance dose, previous pulses of high dose steroids for rejection, prior episodes of adrenal insufficiency with infection or procedures. (See "**Stress Dose Steroids**").
- Anticipate common drug interactions with immunosuppressive meds (e.g. cyclosporine and azoles/warfarin).
- Coordinate with transplant/specialty services. Make a plan for whether they will need to follow the patient postoperatively.

<u>Postoperative management</u>

- Watch for opportunistic infections.
  - Note that patients who are doing well greater than 6 months post transplant develop similar infections to patients without transplants. However, a poorly functioning graft or prior episodes of rejection are risk factors for opportunistic infections at any time.
  - CMV remains a risk even beyond 6 months post transplant. CMV negative hosts with CMV positive donors are at highest risk.
    - Screening test for CMV: serum PCR.
    - Identification of end-organ damage is important—some patients have CMV viremia but no active CMV disease.

  -Note there is a separate transplant ID service when a consult is needed.
- Stress dose steroids when indicated.
- If NPO postop, convert anti-rejection meds to IV. *These are general guidelines—please consult with transplant pharmacist:*

Cyclosporine	Take 1/3 of total daily PO dose, and give as continuous infusion over 24 hrs (e.g. usual dose of 75 mg po bid, total is 150 mg, 1/3 = 50 mg, can give as 2.1 mg/hr IV drip). Monitor levels daily.
Mycophenolate	Note different PO forms: Mycophenolate mofetil (CellCept, MMF) 500 mg = Mycophenolate sodium (Myfortic) 360 mg. IV and PO dose of CellCept generally considered equivalent.
Tacrolimus (FK506)	No IV dosing—must consult with transplant pharmacist and organ specialty service as appropriate. They may recommend using cyclosporine instead.

- Important drug interactions with cyclosporine and FK506:

Increase levels	Decrease levels
erythromycin azole antifungals diltiazem verapamil grapefruit juice	rifampin phenytoin phenobarbital carbamazepine

- Note that sirolimus (Rapamune) may impair wound healing.

Discussion

Patients who are recipients of solid organ transplants generally require specialized care. One of our roles is to ensure good coordination of care and to assist in evaluation of complications unique to this population.