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| **PROTOCOL TITLE:**  **Kidney and Pancreas Post Transplant: Management of Patients with Failed Kidney Allograft** | |
| **APPLICABLE FACILITIES:**  EHC EDH EHH EHI EHN EJCH ELTAC ESJH  EUH EUHM EUHS EUOSH EWWH RJV-ERH RJV-ESOP TEC/ESA | |
| **EFFECTIVE DATE:** | **ORIGINATION DATE:** 06/10/2020 |

**CATEGORY:** Diagnostic/Therapeutic/Preventive, Medication Guidelines

**LEVEL:** Independent

**SCOPE:** All transplant program physicians, practitioners and clinical staff members are responsible for compliance with this clinical protocol.

**PURPOSE:** The purpose of managing immunosuppression in patients with a failed kidney allograft (transplant) is to reduce the burden of immunosuppression while avoiding the complications of withdrawing immunosuppression, which include rejection, secondary adrenal insufficiency, loss of residual renal function, and sensitization. This protocol will also provide a clear pathway for transition of patient care to primary referring nephrologist for continued care.

**TARGET PATIENT POPULATIONS:** Patients with Failed Kidney Allograft (transplant)

**PROTOCOL:**

1. **Immunosuppression Management Guidelines for Patients >1y from Transplant**

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| Patient is **NOT** a re-transplant Candidate | Patient **IS** a potential re-transplant Candidate (living donor, re-listed, etc.) |
| If CNI based regimen: (step-wise approach) *\*\*Consider low level IS if patient has residual urine output or recent rejection*   * 1. Discontinue antimetabolite and reduce CNI dose by 50% and taper off over 3 months, then discontinue   2. After CNI discontinued, taper prednisone to 2.5mg daily for 1 month; then taper further to 2.5mg every other day for 2 months; then discontinue | If re-transplant time frame projected <1y:  If CNI based regimen:   * + Consider tacrolimus goal 3-5mg/dL   + Continue MMF 250-500mg BID   + Continue prednisone 5mg daily   If Belatacept based regimen:   * + Continue belatacept monthly infusions   + Continue MMF 250-500mg BID   + Continue prednisone 5mg daily |
| If Belatacept based regimen: (step-wise approach)  *\*\*Consider low level IS if patient has residual urine output or recent rejection*   1. Discontinue belatacept and reduce antimetabolite by 50% and taper over 3 months, then discontinue 2. After antimetabolite discontinued, taper prednisone to 2.5mg daily for 1 month; then taper further to 2.5mg every other day for 2 months; then discontinue | If re-transplant time frame projected >1y, further taper to one versus two-drug regimen based on transplant provider clinical judgement |

1. **Management of Early Graft Loss (<1y; vascular thrombosis, PNF, etc.)**

Decided on case-by-case basis after reviewing patient-specific factors of re-transplant candidacy, infection risk, etc.

* Consider continuation of protocol immunosuppression if a re-transplant candidate within 1y as outlined above

1. **Complications of Immunosuppression Withdrawal: Rejection of Failed Allograft**

Symptoms Include: graft tenderness, fever, hematuria, localized edema, anemia, gastrointestinal complaints, resistance to erythropoiesis-stimulation agents

Medical Management Options:

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| **Initial Pulse** | Oral Prednisone 100mg daily x5 days | OR | IV Methylprednisolone 5mg/kg daily x3 doses |
| **Taper**  **(after pulse)** | Prednisone 40mg daily x2 weeks, 30mg daily x2 weeks,  20mg daily x2 weeks, 10mg daily x2 weeks, 5mg daily x2 weeks, then discontinue | | |
| *NOTE: consider PPI or H2RA blocker and PJP prophylaxis while on high dose prednisone (>20mg/day)* | | | |

Surgical Management: consider angioembolization and/or transplant nephrectomy if above interventions fail after two rounds, consult transplant surgery team and transplant nephrology team for evaluation and candidacy

1. **Follow Up Guidelines**

Transplant Appointment:

* + - If patient is <1y from transplant or declared PNF, follow short-term follow up guidelines. Transplant Nephrologist should tailor future visits/labs based on clinical factors.
    - If patient is >1y from transplant, schedule appointment with Primary Transplant Nephrologist or Long-Term APP within 1-2 months of declaring failed allograft (either telemedicine or in-person visit).
    - If transplant nephrectomy performed, schedule appointment with Transplant Surgeon for 2 weeks after hospital discharge.

Communication with patient’s Primary Nephrologist:

* Immunosuppression Management Plan as outlined above
* Re-Transplant Candidacy status
* Re-Evaluation within 3-6 months
* *Recommend notification to Transplant Nephrologist of any medical issues that arise if patient is <1y post-transplant*

1. **Lab Guidelines**

* If patient is off all IS, no labs indicated – transfer full care to primary nephrologist
* If patient maintained on belatacept or CNI based regimen, labs per nephrology recs

**RELATED POLICIES / PROCEDURES**: N/A

**DEFINITIONS**: N/A

**REFERENCES AND SOURCES OF EVIDENCE**:

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2. Management considerations in the failing renal allograft. Tom Lea-Henry and Bobby Chacko. Nephrology 23 (2018) 12–19
3. Pham PT, Everly M, Faravardeh A, Pham PC. Management of patients with a failed kidney transplant: Dialysis reinitiation, immunosuppression weaning, and transplantectomy. World J Nephrol. 2015;4(2):148-159. doi:10.5527/wjn.v4.i2.148
4. Prolonged Immunosuppression Preserves Nonsensitization Status After Kidney Transplant Failure. Casey, Michael J.1,6; Wen, Xuerong1; Kayler, Liise K.2; Aiyer, Ravi3; Scornik, Juan C.4; Meier-Kriesche, Herwig-Ulf5Transplantation: [August 15th, 2014 - Volume 98 - Issue 3 - p 306-311](https://journals.lww.com/transplantjournal/toc/2014/08150)

**KEY WORDS**: N/A