ABSTRACTS

POSTER PRESENTATIONS

NEPHROLOGY AND TRANSPLANTATION SCIENCES

1. The Importance of Donor-specific Anti-HLA Antibodies Identification in Renal Transplant Patients with C4d-negative Biopsies
   S. Mehrotra

2. Association Between CYP2E1 (PSTI/RSAI) Gene Polymorphisms And Renal Transplantation Patients Treated With Tacrolimus Among South Indian Populations
   Krishna K

3. Association of NOS3 VNTR, ACE I/D Gene Polymorphism With Post Renal Transplant Patients Medicated With Tacrolimus
   Krishna K

4. FGF 23 is the Best Predictor of Early Post Transplant Hypophosphataemia and Normalizes Faster than iPTH in Living Donor Renal Transplant Recipients: A Longitudinal Follow-up Study
   Jaiswal A

   Shinde GS

6. Long Term Outcome Of Living And Deceased Donor Renal Transplantation In ADPKD
   Godhela VA

7. Participation Of Compatible Donor To Improve HLA Matching Can Increase Kidney Transplant Rate And Also Improve Graft And Patient Outcome
   Varyani UT

8. Six End-Stage Renal Disease Patients Benefitted From First Non-Simultaneous Single Center Domino Chain Kidney Transplantation in India
   Varyani UT
9. Guillain Barri Syndrome Post Renal Transplantation: A Rare Entity  
   Wadhai KG

10. Renal Transplantation In Immunologically High Risk Patient  
    Wadhai KG

11. International Kidney Paired Donation Transplantations To Increase Donor Pool  
    Wakhare P

12. Successful Diseased Donor Renal Transplantation From A Donor with Lupus Nephritis- 
    Pushing The Boundaries To Increase Donor Pool  
    Shah JH,

13. Induction Therapy In Live Related Donor Transplantation In India  
    Radhakrishnan RC

14. Tacrolimus Induced Oxalosis: A Unrecognised Reversible Cause Of Graft Dysfunction  
    Shah MK

15. Acute Kidney Injury In Renal Transplant Recipients - Analysis Of Incidence, Etiology And 
    Outcome.  
    Nagarajan M

16. A Successful Renal Retransplantation In A Patient With Allograft Loss Due To BKV 
    Nephropathy  
    Gattani VS

17. Role Of Plasmapheresis In Management Of ABO Incompatible Renal Transplant: A Single 
    Centre Experience  
    Prajapati AV

    Shah MK

19. Knowledge and Attitudes of first degree relatives of Cameroonian ESRD patients regarding 
    kidney donation  
    Ashuntantang G

20. Systemic Fungal Infections in Renal Transplant Recipients  
    Singh N

21. Weight Gain in Post Renal Transplant Patients: A Greater Challenge  
    Shreelekha SB
Abstract:
Aim: The presence C4d sub-endothelial deposition has been considered a major diagnosis element of antibody-mediated rejection (ABMR) in renal transplantation. The aim of the present study was to highlight the importance of donor specific antibody detection by sensitive solid phase assay in the context of C4d-negative early ABMR.

Methods and results: Two index cases of living-related donor renal allografts patients developed C4d- negative rejection. Both cases had negative cytotoxic and flow crossmatches before transplantation. The serum creatinine levels are shown in table. Both cases experienced augmented anti T cell therapy at the time of rejection, which failed to improve renal function. Meantime, our HLA lab identified circulating anti Class I and Class II HLA antibodies towards donor mismatched antigens by solid phase crossmatch (SPC) with donor lysate and single antigen bead array on Luminex. Additional therapy included high-dose IVIg and plasma exchange. The renal function improved significantly. Furthermore, the donor-specific antibody strength decreased after combined plasmapheresis with IVIG therapy. DSA with Single or Multiple Antigen beads is costly (particularly for individual patients). Solid phase crossmatch (SPC) testing performed with donor lysate on Luminex platform could be useful to diagnose some ABMR episodes. Solid phase crossmatch (SPC) testing is less expensive than SAB assay. In India, per test cost of SPC is 2800/- and SAB is 25000/-, compared to 1500/- each biopsy. Solid phase crossmatch assay by Luminex can also be used for post-transplant routine DSA. Monitoring (economical for Indian population; although this test has limitations for the detection of HLA antibodies)

Conclusions: Early detection and identification of donor-specific anti-HLA antibody with sensitive solid-phase platform allows for better diagnosis of ABMR or mixed forms of allograft rejection in renal transplantation. This is valuable information for the clinical transplant team, especially in cases of inconclusive histopathology. The routine monitoring of DSA in the post-transplant setting offers significant predictors of progression to Chronic Antibody Mediated
Rejection independent of C4d status (Case 2). These two cases provide an important message for the Indian population; where DSA(SAB) is not routinely measured at the time of transplant biopsy and where C4d staining alone has until recently been the gold standard for the diagnosis of ABMR.

Table: The Importance of HLA lab in Renal Transplant Patients with ABMR

<table>
<thead>
<tr>
<th>#</th>
<th>Baseline Creatinine</th>
<th>ALTE CELL MEDIATED REJECTION PERITUBULAR CAPILLARITIS</th>
<th>C4d- Negative</th>
<th>Creatinine at the time of Rejection</th>
<th>HLA Class I+II-Positive</th>
<th>Creatinine after PP with IVIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>0.92</td>
<td>ACUTE T-CELL MEDIATED REJECTION PERITUBULAR CAPILLARITIS</td>
<td>Negative</td>
<td>2.03</td>
<td>Positive</td>
<td>1.7</td>
</tr>
<tr>
<td>#2</td>
<td>1.4</td>
<td>Focal interstitial mononuclear infiltrates with peritubular capillary dilatation</td>
<td>Negative</td>
<td>2.7</td>
<td>Positive</td>
<td>1.8</td>
</tr>
</tbody>
</table>

---

2: Association Between CYP2E1 (PSTI/RSAI) Gene Polymorphisms And Renal Transplantation Patients Treated With Tacrolimus Among South Indian Populations

Krishna K, Ramprasad E, Gnanasambandan R, Soundararajan P.

Institute: Sri Ramachandra Medical College, Porur, Chennai

E-mail: krisreddy_1234@yahoo.co.in

Abstract:

Introduction: CYP2E1 is a member of P450 super family and cytochrome P450 (CYP) enzymes metabolize the immunosuppressive drugs, which commonly used for renal transplantation patients. Present study aimed to investigate the association between CYP2E1 gene polymorphisms and renal transplantation patients treated with tacrolimus in south Indian populations.

Materials and Method: Fifty renal transplantation patients treated with tacrolimus drug and fifty healthy unrelated individuals were included as control subjects. The CYP2E1 gene (rs2031920 and rs3813867) polymorphisms were genotyped using PCR-RFLP method.

Results: No significant association was observed between the CYP2E1 gene polymorphisms and renal transplantation patients treated with tacrolimus. LD analysis revealed that the rs3813867 and rs2031920 act as surrogates for each other. The recessive alleles of the studied polymorphisms was shown that the significant association between the non-toxic and toxic groups (p=0.018) of renal transplantation patients.
Conclusions: Present study revealed that the CYP2E1 gene polymorphisms were not associated with renal transplantation patients treated with tacrolimus, but a significant association was found with the homozygote variant of the CYP2E1 PstI/RsaI polymorphism and drug toxicity among the patients.

3: Association of NOS3 VNTR, ACE I/D Gene Polymorphism with Post Renal Transplant Patients Medicated with Tacrolimus

Krishna K, Ramprasad E, Gnanasambandan R, Soundararajan P
Institute: Sri Ramachandra Medical College, Porur, Chennai
E-mail: krisreddy_1234@yahoo.co.in

Abstract:
Introduction: Tacrolimus (TAC) is the backbone of immunosuppressive drugs used in most solid organ transplant recipients. The effect of tacrolimus on kidney appears to be multi-factorial. Renal toxicity may occur due to an imbalance in the secretion and metabolism of nitric oxide and angiotension converting enzyme levels in the plasma. Present study, aimed to investigate the association between ACE I/D, NOS3 VNTR polymorphisms in post renal transplantation patients treated with tacrolimus.

Materials and Methods: The present study investigated ACE I/D and NOS3 VNTR polymorphisms in 50 post renal transplantat patients treated with tacrolimus and 100 healthy subjects. The ACE I/D and NOS3 VNTR polymorphisms were genotyped using PCR-RFLP method. Genotypes and allele frequencies were compared between cases and control.

Results: The ACE I/D and NOS3 VNTR polymorphisms are followed Hardy-Weinberg equilibrium. Distribution of ACE ID and NOS3 VNTR genotypes between control and cases was not statistically significant. The significant differences was observed for tac dose mg/kg/day (p=0.002) and Concentration/dose ratio (p=0.004) between toxicity and no toxicity groups. The ACE I/D, NOS3 VNTR genotype distribution between the toxicity and non-toxicity groups revealed that there is no significant association.
Conclusions: Present study revealed that the ACE I/D and NOS3 VNTR gene polymorphisms were not associated with renal transplantation patients treated with tacrolimus. Furthermore, our data suggests that there is no evidence for the involvement of ACE I/D and NOS3 VNTR polymorphisms in the toxicity among the renal transplantation patients.

4: FGF 23 Is Best Predictor of Post-Transplant Hypophosphataemia and Normalizes Faster Than Intact Parathyroid Hormone in Living Donor Renal Transplant Recipients: A Longitudinal Follow-Up Study

Jaiswal A, Prasad N, Kumar S, Chaturvedi S, Agarwal V

Institute: Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow

E-mail: akhileshjaiswal@hotmail.com

Abstract: Background and Aim: FGF23 and iPTH) are involved in calcium-phosphate metabolism and are risk factors for bone decalcification, cardiovascular diseases, progression of chronic kidney disease and mortality. We aimed this study to analyze the serial changes in iFGF23, iPTH, serum calcium and inorganic phosphate level in renal transplant patients.

Method: Total 63 ESRD patients who underwent living donor transplantation were recruited. Serum FGF23, iPTH, uric acid, inorganic phosphate (iP), BUN and creatinine were measured before transplant, and 1 month (M1), 3 month (M3) and 12 months (M12) post-transplantation.

Results: FGF23 level was decreased by 93.81% at M1, 96.74% at M3 and 97.53% at M12 and iPTH decreased by 67.95% at M1, 74.95% at M3 and 84.9% at M12. The prevalence of hyperparathyroidism was 63.5%, 42.9% and 11.1% at M1, M3 and M12 of post-transplantation respectively. FGF23 and iP levels remained above the normal range in 23(36.5%) and 17(27%) patients at M1; in 10(15.9%) and 5(8%) at M3, respectively and in none at M12 post-transplantation. On multivariate regression model, pre-transplant iP was positively associated with iPTH (p=0.016) but not with FGF 23; however after transplant iP level was negatively associated with FGF23 (p<0.001), but not with iPTH.
Conclusion: In conclusion, our data indicate that “hyperphosphatinonism” regresses by 1 year after successful renal transplantation. FGF23 is better correlated with iP and normalizes faster than iPTH in post-tx living donor renal allograft recipients.


Shinde GS, Kute VB, Shah PR, Trivedi HL.
Institute: G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L.Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.
E-mail: dr.shaan.s@gmail.com

Abstract:
Aims: Because of the ongoing shortage of deceased donor organs, the combination of kidney paired donation (KPD) with desensitization represents the most promising opportunity to increase the transplantation rate of our most immunologically challenging patients.

Method: A 26 year male developed end-stage renal disease due to chronic glomerulonephritis. He was highly sensitized for renal transplantation with wife as prospective donor due to blood transfusions. Immunological profile remained unacceptable for transplantation with original donor even after desensitization protocol due to high titer donor specific antibody (DSA). The Immunological profile [lymphocyte toxicity cross match, flow cross match and DSA] turned out acceptable for transplantation with rescue swap donor after desensitization protocol that was having only one low titer DSA before desensitization.

Results: The three way KPD exchange was performed with steroid and thymoglobulin induction and triple immunosuppressive regimen. All the recipients were discharged with normal and stable allograft function. Mean sr creat. 1.2 mg dl at 15 months follow up.
**Conclusion:** The use of desensitization in combination with innovative paired-donor exchange programs, offer the potential to further improve access and outcomes, minimizing the shortcomings of one single form of therapy alone.

---

**6: Long Term Outcome Of Living And Deceased Donor Renal Transplantation In ADPKD**


**Institute:** G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L.Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.

**E-mail:** vijayghodela@gmail.com

**Abstract:**

**Background:** Renal transplantation (RT) has become the treatment of choice for end-stage renal disease (ESRD) in autosomal dominant polycystic kidney disease (ADPKD), the most common genetic kidney disease.

**Methods:** We compare retrospectively RT outcomes [patient /graft survival, rejection rates] in group 1 [23 deceased donors (14 males and 9 females)] and group 2 [79 living donors (28 males and 51 females)] between 2005 and 2015. Diagnosis of ADPKD was established by family history and ultrasound. An individualized approach was applied for the need of pre-transplant nephrectomy. Mean age of patient was 47 and 42 years in group 1 and 2. Mean age of donors was 46 and 46 years in group 1 and 2. There were 16 male and 7 female patients in group 1. There were 69 male and 10 female in group 2.

**Results:** Patient survival (%) rates at 1, 5 and 10 years were 87, 58, 53 in group 1 and 97, 95, 89 in group 2. Graft survival (%) rates at 1, 5 and 10 years were 96, 91, 91 in group 1 and 99, 93, 93 in group 2. Biopsy prove acute rejection rate was 13 % and 20 % in group 1 and 2 respectively. Patient loss with functioning graft due to infections were more common in group 1 than group 2 (p value <0.01)
Conclusion: In our center, in long-term patient survival is better in group 2 than group 1. The graft survival is similar in the 2 groups and therefore, we believe that living donor RT should be encouraged in ADPKD compared to deceased donor RT.

---

7: Participation Of Compatible Donor To Improve HLA Matching Can Increase Kidney Transplant Rate And Also Improve Graft And Patient Outcome

**Varyani UT, Kute VB, Vanikar AV, Trivedi HL.**

**Institute:** G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L. Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.

**E-mail:** umesh08varyani@gmail.com

**Abstract:**

**Background:** Infection is the most common cause of hospitalization, morbidity and mortality in post-transplant recipients in developing countries like India. With the availability of potent immunosuppression the short term graft outcomes have improved but the risk of infections has increased and the long term graft and patient survival is poor. Infections are the leading cause of death with functioning grafts in the developing countries. By increasing the HLA match we can decrease the need of more potent immunosuppression; thereby decreasing the risk of infection and improving graft and patient survival. Here we report a case where two way paired exchange was done for better HLA match.

**Methods:** Two way KPD was performed where one compatible pair benefitted by better HLA match and other O blood group patient benefitted by getting ABO compatible O group donor. Both patients had anatomic, functional, and immunologically comparable donors. Kidney transplant was performed simultaneously.

**Results:** Outcome was similar for both patients. Mean serum creatinine is 0.95 mg/dl on one month follow up.
Conclusion: National KPD program will expand the donor pool. Long term outcome of compatible pairs with poor HLA matching can be improved better HLA matching in KPD which also increases the transplant rate of KPD program.

8: Six End-Stage Renal Disease Patients Benefitted From First Non-Simultaneous Single Center Domino Chain Kidney Transplantation In India

Varyani UT, Kute VB, Vanikar AV, Trivedi HL.
Institute: G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L. Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.
E-mail: umesh08varyani@gmail.com

Abstract:
Background: Because access to kidney transplantation (KT) with HLA-desensitization protocols and ABO incompatible transplantation is very limited due to high costs and increased risk of infections from more intense immunosuppression, kidney paired donation (KPD) promises hope to a growing number of end-stage renal disease (ESRD) patient in India.

Methods: We present a government and institutional ethical review board approved study of single center domino chain KT of 6 ESRD patients and 6 donors who participated in KPD due to HLA incompatible (N=5) and ABO incompatible (n=1). All patients had anatomic, functional, and immunologically comparable donors. The average time required from registration in KPD registry to find cross donor was 45 days and time required to perform actual KT after legal permission was 2 months.

Results: Graft and patient survival were 100% and 100% and one patient had biopsy-proven acute borderline T cell rejection. Mean serum creatinine was 0.8 mg/dl at two month follow-up. The waiting time in KPD was short as compared to deceased donor transplantation.

Conclusion: We report first non-simultaneous single center domino chain KT of 6 ESRD patients and 6 donors from India. Domino chain transplantation have the potential to expand the living donor pool and increases transplant opportunity for the sensitized patients.
9: Guillain Barri Syndrome Post Renal Transplantation: A Rare Entity

Wadhai KG, Kute VB, Patel HV, Gera DN, Vanikar AV, Shah PR, Trivedi HL

Institute: G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L. Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.

E-mail: dockundan@gmail.com

Abstract:

Background: Neurologic complications after renal transplantation (RT) are usually related to drug toxicity, infections or symptoms induced by deterioration of renal allograft function. Guillain-Barri Syndrome (GBS) is acute, frequently severe fulminant polyradiculoneuropathy characterized by areflexic motor paralysis with/without sensory disturbance.

Methods: We report a rare case of post-renal transplant (RT) Guillain-Barré syndrome (GBS) in a 34 years old male, presented with sudden onset of ascending pattern paralysis of lower limbs (LL) without bowel/bladder involvement. The diagnosis was confirmed by neurological examination and nerve conduction velocity (NCV) studies.

Result: Patient was treated with intravenous immunoglobulin (IVIg), 0.4 gm/kgBW/day for 5 days. On three months follow-up he had normal renal functions and normal nervous system examination. Our patient had GBS due to unknown etiology and recovered fully.

Conclusion: GBS is rare in post-renal transplant patients. Early diagnosis and aggressive conservative management is the key to recovery from GBS.
Renal Transplantation in Immunologically High Risk Patient

Wadhai KG, Kute VB, Patel HV, Gera DN, Vanikar AV, Shah PR, Trivedi HL

Institute: G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L. Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.

E-mail: dockundan@gmail.com

Abstract:
Background: Sensitized renal allograft candidates face significant barriers to transplantation. While several options exist, including kidney paired donation (KPD), desensitization or pursuing a deceased donor kidney transplant; it is unclear from existing data what is the appropriate protocol for an individual patient.

Methods: We report a case of 41 year old female, chronic glomerulonephritis-chronic kidney disease (CGN-CKD) on maintenance hemodialysis; admitted for renal transplant (RT) with husband as donor. She was immunologically highly sensitized with husband and with > 20 cross donors (table 1).

Results: She underwent successful desensitization protocol with Plasmapheresis + Rituximab + IVIG + tacrolimus + mycophenolate and RT was performed in three way exchange. HLA matching with cross donor was 7/10. Single antigen quantitative was performed at 1 month interval for 3 times and they were <1000 MFI. All the patients had stable graft function (creatinine 0.9 mg /dl) at 6 months follow up on tacrolimus based triple immunosuppression.

Table 1: LCM, FCM and DSA with donors

<table>
<thead>
<tr>
<th>With donor</th>
<th>Lymphocyte cross match (LCM/DTT/AHG) %</th>
<th>Flow cross match (MCS)</th>
<th>Single antigen quantitative (MFI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husband (before desensitization)</td>
<td>80/80/90</td>
<td>288</td>
<td>DR 52-9135</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DR 14-12784</td>
</tr>
<tr>
<td>Other cross donors</td>
<td>80/80/90</td>
<td>&gt;200</td>
<td>More than 3 DSA &gt;5000</td>
</tr>
</tbody>
</table>
Conclusion: Patients who are both difficult to match due to broad sensitization and hard to desensitize because of strong donor reactivity can often be successfully transplanted through a combination of desensitization and KPD. Using this combination it is estimated that most patients with incompatible live donors can undergo successful renal transplantation.

11: International Kidney Paired Donation Transplantations to Increase Donor Pool

Wakhare P, Kute VB, Patel HV, Shah PR
Institute: G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L. Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.
E-mail: pavan.wakhare@gmail.com

Abstract:
Objective: We estimated that many patients on the waiting list for kidney transplantation have immunologically incompatible suitable living donors. Kidney paired donation (KPD) transplantation is superior to desensitization for patients with HLA and Blood group incompatible donors. Recently we decided to begin an international KPD program.

Methods: We report international living related KPD transplantations which occurred in February 2015 after legal permission from authorization committee between a pair from Portugal and India who were HLA incompatible and ABO incompatible with their spouse. ESRD patient from Portugal (age 40, blood group A) was highly sensitized with his wife (age 35, blood group O). His
lymphocyte cross match (LCM) and flow cross match (FCM) were positive with his wife having >14000 donor specific antibody (DSA). His LCM, FCM and DSA were negative with Indian kidney donor (35 year, A blood group). Both the pairs have anatomical functional and immunological similar donor. The Indian Female patient (30 years, blood group) also had negative LCM, FCM, and DSA with donor from Portugal. As with the donor procedures, the transplantation procedures were performed at the same time for all in our single center

**Results:** Both pairs underwent uneventful KT and at 6 months of follow up the serum creatinine is 1 mg/dl on tacrolimus based immunosuppression. The uniqueness of these transplantations was that they are the first international KPD transplantations in our center.

**Conclusion:** We believe that international KPD transplantation have the potential to expand the living donor pool and increases transplant opportunity for the sensitized patients

---

12: Successful Diseased Donor Renal Transplantation From A Donor with Lupus Nephritis-
Pushing The Boundaries To Increase Donor Pool

**Shah JH,** Kute VB, Shah PR, Vanikar AV, Patel HV, Shah MK, Gattani V, Trivedi HL

**Institute:** G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L. Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.

**E-mail:** shah.jay.js@gmail.com

**Abstract:**

**Introduction:** Due to increasing demand of transplantable kidneys, there is need to expand donor pool safely like using expanded criteria donors, donors with systemic diseases. There is paucity of literature regarding use of a kidney with pre-existing lupus nephritis (LN) or glomerulonephritis for deceased donor renal transplantation (DDRT).

**Methods:** A 34-year-old female who was a known case of systemic lupus erythematosus (SLE) with hypothyroidism since 2 years had large bilateral vertebrobasilar territory infarcts leading to brain death. Her serum creatinine (S Cr) was 0.8 mg/dl and urinalysis showing proteinuria +1 and microscopic hematuria (22-25 RBCs/hpf). Anti-nuclear antibody (ANA) and Anti dsDNA was strong positive. Her biopsy immediately before transplantation showed ISN/RPS class 2 LN
Without chronic damage. Literature regarding DDRT with use of donor kidney with LN was reviewed and transplantation in a 57-year-old female with chronic kidney disease of unknown etiology was done after negative crossmatch.

**Result:** Post transplant course was remarkable by delayed graft function requiring hemodialysis on 2nd and 4th post-operative day. She was maintained on triple immnosuppressive therapy with prednisolone, tacrolimus, mycophenolate mofetil and discharged on 12th post-operative day with S Cr 1.45 mg/dl with normal urinalysis, serum complements and negative ANA, anti-DsDNA. Six months after transplantation, serum creatinine levels ranged from 1.0-1.2 mg/dl. To the best of our knowledge, we are reporting first case report of such kind from India and there are only three case reports with use of kidneys from donors with SLE.

**Conclusion:** DDRT from a donor kidney with LN may be considered cautiously to expand donor pool. Pre-transplant renal biopsy must be done to assess disease activity and chronicity.

13: Induction Therapy In Live Related Donor Transplantation In India


**Institute:** Christian Medical College, Vellore

**E-mail:** radhikacr999@gmail.com

**Abstract:**

**Introduction:** Most transplant centres in the west use induction agents as part of their immunosuppression protocol as they have been shown to reduce acute rejections without increase in infections. There is no data from India regarding the need for induction in living related donor kidney transplantation, the ideal induction agent and their consequences in our population.

**Methods:** Consecutive living related kidney allograft recipients at Christian Medical College, Vellore from January 2005 to December 2013 were included in the study. They were divided into three groups based on the induction agent used: The IL2RB group (Simulect (Basiliximab) 20 mg on D0 and D4), the ATG group (single dose Thymoglobulin 3mg/Kg on D0) and the No-induction group.
Results: 677 renal allograft recipients received grafts from 605 living donors and 72 deceased donors. 605 living related transplant recipients (M:F=3.6:1, mean age 35.2±11.9 yrs) were followed up for 35.1±23.7 months. No induction was given for 160 (26.4%) while 403 (66.6%) received IL2RB and 42 (6.5%), ATG. They were predominantly on Tacrolimus (75.6%) and Mycophenolate (81%). Induction group contained a greater percentage of high-risk patients (18.1% in no-induction vs 24.0% in induction, p<0.001). IL2RB, ATG & no-induction groups were compared in terms of HLA AB <2 antigen match (29.7, 35.7 & 6.3% respectively), historical cross match positive patients (3.0, 47.6 & 3.1%) and second transplants (0.7, 0.5 & 0.3%). Primary outcomes of death (4.5, 4.9, 11.9%) and graft loss (5.3, 2.4 & 15.7%) were calculated for the three groups. Use of Induction agents significantly decreased deaths (11.9 vs 4.5%, p=0.001) and graft loss (15.6 vs 4.9%, p<0.001). Comparing IL2RB and ATG groups, there was no difference in deaths (4.5 vs 4.8%, p=1.000) or graft loss (5.2 vs 2.4%, p = 0.710). Biopsy proven acute rejections were significantly less in induction vs No induction group (17.5 vs 25.6%, p = 0.026) but there was no significant difference between IL2RB and ATG groups despite increased immunological risk in ATG group (17.3 vs 19%, p= 0.780). Despite increased cross match positive patients in ATG group than IL2RB group (50.0 vs 3.0%, p<0.001), there was no significant difference in AMR (2.4 vs 5.4%, p=0.712). There was no difference in multiple rejection rates among the 3 groups. There was decreased incidence of CMV (11.7 vs 23.1%, p<0.001), tuberculosis (6.3 vs 11.9%, p=0.024) and trend towards reduced fungal infections (3.6 vs 6.9%, p=0.084) in induction group compared to no induction group while urinary tract infections, BK virus infection and incidence of leucopenia were similar. When IL2RB and ATG groups were compared, there was increased incidence of BK virus infections in ATG group (5.7 vs 14.3%, p=0.044). Tuberculosis, Varicella Zoster, HSV and urinary tract infections were similar in both groups though there was a trend towards more CMV infections in ATG group which was not statistically significant.

Conclusion: In living related renal transplantation, use of induction agent reduces acute allograft rejections and graft loss and improves survival even in high immunologic risk group. Even when used in high risk groups, ATG induction has rejection, death and graft loss rates comparable to basiliximab which was generally more used in lower risk group. Infection risk profile appears to be similar for these 2 agents except for an increased risk of BK virus with ATG.
14: Tacrolimus Induced Oxalosis: A Unrecognised Reversible Cause Of Graft Dysfunction


Institute: G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L. Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.

E-mail: mauls39@gmail.com

Abstract:

Aims: Calcineurin inhibitors (CNIs) are unanimously accepted primary immunosuppressive drug for last two decades because of significantly decreased acute rejection (AR) rates and significantly better 1-year patient and graft survival for kidney transplant recipients. But, they have specific side effects which prove them long term foe. Acute tubular necrosis, Tubular and myocyte vacuolization, tubular calcification, acute microvascular toxicity, arteriolar hyalinosis, stippled fibrosis, diffuse interstitial fibrosis and focal or segmental glomerular sclerosis are known side effects, but oxalosis causing graft dysfunction has never been reported.

Method: 28 year old male patient underwent living related renal transplant for collapsing glomerulopathy-CKD with mother as a donor. He had uneventful immediate postoperative course but had unexplained graft dysfunction after 2 month. Graft biopsy was suggestive of denovo oxalosis (birefringent elongated fan shaped crystals with broad ends embedded in tubular membranes) without immune injury. His 24 hour urinary oxalate level was within normal limit and didn’t have nephrocalcinosis. Patient was switched over from tacrolimus to sirolimus after ruling out urological, vascular and immunological causes of graft dysfunction.

Result: Surprisingly his renal function started improvement after a week and he completely recovered after 2 weeks and discharged with normal renal function. Surveillance biopsy after 1 months was absolutely unremarkable. Focal parenchymal microcalcification has been described which may represent calcification of tubular epithelium damaged by these drugs; however, oxalosis has never been described in literature secondary to tacrolimus.

Conclusion: Tacrolimus induced oxalosis is unrecognised yet reversible cause of graft dysfunction.

---------------------------------------------------------------------------------------------------------------------
15: Acute Kidney Injury In Renal Transplant Recipients: Analysis Of Incidence, Etiology And Outcome

Nagarajan M, Murugananth S, Gopalakrishnan N, Balasubramaniyan T, Dineshkumar T, Dhanapriya J, Sakthirajan R, Malathy N
Institute: Madras Medical College, Chennai, India
E-mail: mmcnephro@gmail.com

Abstract:
Background: Acute kidney injury (AKI) is one of the major determinants of graft survival in kidney transplantation (KTx).

Objective: To study the incidence, etiology, outcome, risk factors and the impact of AKI on graft and recipient survival.

Methods: A retrospective analysis of 219 renal transplant recipients of living related and deceased donor kidney transplantation (KTx) was done. Risk factors for AKI and risk factors that caused progression to CKD were studied. Statistical analysis was done with Pearson chi square test, multivariate analysis and Kaplan Meier analysis.

Results: AKI was observed in 112 (51.14%) recipients - Mean age 41.5 Â± 11.2 years and mean duration of follow-up was 43.2 Â± 12.5 months. Etiologies of AKI were infection (47.32%), rejection (26.78%), CNI (Calcineurin inhibitor) toxicity (13.39%), and recurrence of native kidney disease (NKD) (4.46%). About 11.21% (p=0.342) of non AKI and 70.53% (p=0.004) of AKI recipients developed CKD. NODAT (New Onset Diabetes After Transplant) (p=0.002) and deceased donor transplant were the significant risk factors for AKI. Risk factors for progression to CKD in AKI group were infection (HR=3.62, 95%CI 2.8-5.75, p=0.03), rejection (HR=9.92 95% CI 5.56-12.36, p=0.001), AKI within first year of KTx (HR=7.32,95% CI 4.37-15.32,p=0.007) and multiple episodes of AKI (HR=6.92,95%CI 3.92-9.63,p=0.008). Five year graft survival was better in non AKI group with mean graft survival of 56 months compared to AKI group with mean graft survival of 22 months (p value:0.005)

Conclusion: 1. Incidence of AKI in renal transplant recipients was 51.4%.
2. Infections (47.32%) and rejection (26.78%) were the most common causes.
3. AKI portended inferior long term graft survival.
4. AKI progressed to CKD in 70.53% of patients.
A Successful Renal Retransplantation In A Patient With Allograft Loss Due To BKV Nephropathy

Gattani VS, Patel HV, Kute VB, Shah M, Shah JH, Shah PR, Vanikar AV, Trivedi HL
Institute: G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L.Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.
E-mail: vipulgattani@gmail.com

Abstract:
Aim: Biopsy-proven BK virus-associated nephropathy (BKAN) occurs in 8–10% of renal transplant recipients. Graft loss secondary to BKAN with or without rejection is 60%. Retransplantation in such patients is safe and feasible but available data is limited.

Method: We report a case of middle aged female with posttransplant chronic allograft dysfunction due to BKAN at 12 months of posttransplant and was planned for 2nd renal transplant under deceased donor renal transplant programme. Patient was on minimal immunosuppression (prednisolone 5mg/day) prior to 2nd transplant. BKV DNA PCR in blood and in urine done prior to 2nd transplant were negative. IL2 receptor antagonist was used as induction agent in 2nd transplant as opposed to thymoglobulin (1.5 mg/Kg) in 1st transplant and there was no episode of rejection. Patient had delayed graft function and underwent graft biopsy on day 3 which revealed acute tubular necrosis (tacrolimus level - 7.43ng/mL; CIT - 10 hrs). Patient required hemodialysis till day 21 following which urine output was established. Her s. creatinine declined to 1.23 mg/dL on discharge at 1 month. At 9 months, her s. creatinine was 1.1 mg/dL. Results: Patient underwent retransplantation after allograft loss to BKAN without any reactivation of BK virus at 12 months of follow up.

Conclusion: Retransplantation in patient with allograft loss due to BKAN is safe. Viremia clearance is associated with lack of viral replication in repeat transplant. Allograft nephrectomy is not mandatory.
17: Role Of Plasmapheresis In Management Of ABO Incompatible Renal Transplant: A Single Centre Experience

Prajapati AV, Chandak S, Vanikar AV
Institute: G.R. Doshi and K.M. Mehta Institute of Kidney diseases And Research Centre and Dr. H.L.Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India.
E-mail: amitihbt11@gmail.com

Abstract:
Background: ABO-incompatibility (ABOi) was an absolute contraindication for renal transplants (RT) till recently. Now ABOiRT are well accepted following plasmapheresis to reduce antibody titres in recipients. We carried out this study from Dec’14 to Nov’15 to evaluate the role of plasmapheresis in management of ABOiRT.

Material and Method: We analyzed demographic data including ABO-antibody titres pre/post RT. Graft function was measured in terms of Serum Creatinine(SCr). Plasmapheresis was performed on alternate days pre-transplant to achieve nadir ABO-antibody titres of 1:4. Titres were repeated twice weekly for 1st week, weekly for 1st month, monthly for 6 months and 6 monthly thereafter.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age/ Sex</th>
<th>Donor/ patient blood group</th>
<th>Baseline titres</th>
<th>Plasmapheresis Pre-Tx titer</th>
<th>Post- Tx titer</th>
<th>Post-Tx titer</th>
<th>Plasmapheresis Post-Tx titer</th>
<th>Follow-up (mths)</th>
<th>Present titer</th>
<th>Scr (mg/dL) (present)</th>
<th>Graft loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35/M</td>
<td>B →A</td>
<td>1:128</td>
<td>7</td>
<td>1:4</td>
<td>1:4</td>
<td>3</td>
<td>12</td>
<td>NA</td>
<td>NA</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>32/M</td>
<td>B →O</td>
<td>1:128</td>
<td>4</td>
<td>1:4</td>
<td>1:2</td>
<td>0</td>
<td>8</td>
<td>NEG</td>
<td>NEG</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>27/M</td>
<td>B →A₁B</td>
<td>1:16</td>
<td>3</td>
<td>1:2</td>
<td>NEG</td>
<td>0</td>
<td>7</td>
<td>NEG</td>
<td>1.49</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>32/M</td>
<td>A₁B →A₁</td>
<td>1:16</td>
<td>3</td>
<td>1:4</td>
<td>NEG</td>
<td>0</td>
<td>1</td>
<td>NEG</td>
<td>1.55</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>50/M</td>
<td>A₁B →B</td>
<td>1:4</td>
<td>2</td>
<td>1:4</td>
<td>1:2</td>
<td>0</td>
<td>1</td>
<td>NEG</td>
<td>0.82</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>39/M</td>
<td>B → O</td>
<td>1:32</td>
<td>9</td>
<td>1:4</td>
<td>1:2</td>
<td>0.5</td>
<td>NEG</td>
<td>4.68</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>16/M</td>
<td>B → O</td>
<td>1:32</td>
<td>5</td>
<td>NEG</td>
<td>NEG</td>
<td>0</td>
<td>0.5</td>
<td>NEG</td>
<td>0.53</td>
<td>No</td>
</tr>
</tbody>
</table>
**Result:** Plasmapheresis was safe and effective. The results are mentioned below. Conclusion: Plasmapheresis helps in safe minimization of ABO-antibody load and effective management of ABOi transplants.

---

**18: Histoplasmosis: A Rare Cause Of Pancytopenia In Post Renal Transplant**

**Institute:** G.R. Doshi and K.M. Mehta Institute of Kidney diseases and Research Centre and Dr. H.L. Trivedi Institute of Transplantation Sciences (IKDRC-ITS), Ahmedabad, India  
**E-mail:** mauls39@gmail.com

**Abstract:**  
**Aims:** Histoplasmosis is an important opportunistic fungal infection in immunocompromised host but usually seen in endemic areas i.e. Eastern USA including Ohio, Mississippi, St. Lawrence River valleys, Latin America & Sub Saharan Africa. There are very few case reports from India especially from Eastern India along long rivers The Ganges & The Brahmaputra. Its incidence in post renal transplant from West reported apx. <1%. It usually occurs during first 1-2 year following transplant.  
**Method:** We report a case of young male from Rajasthan who underwent living related donor renal transplant presented to us with pancytopenia with fever 5 years post transplant. He was on maintenance steroid, tacrolimus and azathioprine. He didn’t have hepatosplenomegaly and lymphadenopathy. After stopping azathioprine which is likely cause of pancytopenia and ruling out other common causes, we performed bone marrow biopsy for persistent pancytopenia for >2 weeks. Bone marrow examination revealed increased number of histiocytes with foamy cytoplasm. These histiocytes are filled with many intracytoplasmic oval globose yeast like PAS positive material, having slightly eccentric nucleus and a clear zone round the nucleus suggestive of histoplasma capsulatum.  
**Result:** He received liposomal AmpB for 14 days followed by oral itraconazole with a plan to continue it for 12 months. His total count normalized after 10 days and his platelet count stabilized after 14 days. Follow up CBC after a month became normal.  
**Conclusion:** It’s probably a first reported case of bone marrow histoplasmosis in post renal transplant from this region of world.
19: Knowledge And Attitudes Of First Degree Relatives Of Cameroonian ESRD Patients
Regarding Kidney Donation


Institute: University of Yaounde I, University of Douala
E-mail: maglo09@hotmail.com

Abstract:
Aim of study: To assess the knowledge and attitudes of first degree relatives of Cameroonian patients with ESRD towards kidney donation

Methods: consenting parents, children, siblings and spouses of patients on maintenance hemodialysis at the Yaounde and Douala General Hospitals were included in the study. Sampling was consecutive from December 2013 to April 2014. Data collection was done using a pre-tested questionnaire, comprising of 44 questions. The chi-square was used for interdependency between variables with p values < 0.05 considered statistically significant.

Results: A total of 157 (97 females) participants representing family members of 84 were included. Their mean age was 37.80±12.8 years. Offspring of patients accounted for 41.4% of the study population, while 90% were Christians. About 89.8% (n=141) of participants had at least a
secondary level education. Globally knowledge about kidney donation was poor (34, 7%). Overall 91.7% approved of kidney donation; with 73.9% approving deceased donation. About half (48%) were willing to be live kidney donors and 58.3% deceased donors. Children and young persons (56%) and spouses (49%) were the preferred recipients of live donations. Religious beliefs that favour donation (p= 0.026), knowledge of a kidney donor or recipient (p= 0.045), good knowledge about kidney donation (p= 0.012) were factors favouring kidney donation. Cultural beliefs accounted for 5.7% of negative attitudes.

**Conclusion:** First degree family members of Cameroonian patients with ESRD constitute a potential kidney donor pool for transplantation.

---

**20: Systemic Fungal Infections in Renal Transplant Recipients**

Singh N, Soundararajan P, Prasad P.

**Institute:** Sriramachandra Medical College, Chennai

**E-mail:** drnehasingh31@gmail.com

**Abstract:**

**Aim:** To estimate the incidence of systemic fungal infections in renal transplant recipients in a single centre from South India.

**Introduction:** Fungal infections are an important cause of morbidity and mortality in renal transplant recipients. The symptoms of systemic fungal infections are nonspecific, particularly in their early stages. The high rates of mortality and graft loss owing to fungal infections render early diagnosis and treatment imperative in immunosuppressed patients. Antifungal therapy should be initiated early in patients with a suspected fungal infection (even before laboratory findings have confirmed that diagnosis) and should be administered with appropriate adjustment of immunosuppressive regimens. Invasive fungal infections are a significant and often lethal problem in transplant patients and they need to addressed in time and aggressively to prevent morbidity.

**Materials and method:** Our study included 280 post renal transplant recipients, studied over a period of November 2008 to November 2015. Both deceased donor and live related renal transplant recipients were included.

**Results:** Incidence of systemic fungal infection was seen in 9.2% cases (n=26). Of these Candida species constituted 57.6% (n=15), Mucormycosis 15.3% (n=4), Aspergillosis 3.8% (n=1),
Histoplasmosis 3.8% (n=1), Fusarium solani 3.8% (n=1), Cladophialophora carrionii 3.8% (n=1), Cryptococcus 3.8% (n=1), Fungal ball 7.6% (n=2). Deceased donor transplant recipients accounted for 46.1% (n=12) cases, whereas live related renal transplant accounted for 53.8% (n=14) of the cases. Out of 26 cases with systemic fungal infection 65.3% (n=17) received induction therapy with Basiliximab 88% cases (n=15), Antithymocyte globulin 5.8% (n=1) and Dacluzimab 5.8% (n=1). Mortalitity occured in 23% (n=6) of the cases.

**Conclusion:** Despite early recognition and timely administration of antifungal therapy, the mortality rate is high with systemic fungal infections. Patients who are given induction therapy should be closely monitored for hidden symptoms of these diseases. Efficient laboratory help is the need for the hour to recognize atypical infections in these patients.

---

**21: Weight Gain in Post Renal Transplant Patients: A Greater Challenge**

Shreelekha SB, Hemamalini AJ, Soundararajan P

**Institute:** Sri Ramachandhra University and Hospital, Chennai, India

**E-mail:** shreelekhasb12@gmail.com

**Abstract:**

**Objective:** To study the prevalence of weight gain in post renal transplant patients. Methods: Retrospective observational study.

**Material and method:** Hospital transplant unit - inpatient ward and outpatient clinic. Thirty-eight patients were selected and nutritional assessment was performed using standard protocols. Dietary intake was assessed using three day dietary recall and food frequency questionnaire.

**Results:** Out of thirty eight patients assessed, 92% (n=35) of subjects were found to have gained weight over a period of one year, with the gain ranging between 4-20 kgs with a mean gain of 9.4±0.02 kgs with a rate of weight gain of 85g/day. Only three patients (08%) reported to have lost weight of about 3-4kgs. Of the 92% subjects, 54% were falling in obese category while the remaining 46% were falling under overweight category. The food frequency and 3 day dietary recall of these 35 subjects revealed delayed satiety contributing to irregular snacking pattern. The Renal biochemical profile showed elevated blood urea nitrogen and serum creatinine levels in patients with weight gain more than 7kg.
**Conclusion:** Weight gain on post renal transplant patients is an alarming concern for the patient graft survival. It is a greater challenge for both nephrologists and dietitians to prevent weight gain in the first year of post renal transplantation period. Diet therapy is very essential during both pre and post renal transplant period with regular monitoring of nutritional evaluation.

**Keywords:** Weight-gain and post renal transplantation