

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0690

Abstract Submission No. : APCN20250050

Impact of Youth Education on Brain-Dead Organ Donation Awareness

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Abstract

Organ donation from brain-dead donors is essential in transplantation medicine, yet public awareness and acceptance remain low. Vitallink, in collaboration with school teachers, developed a Life-Respect Education program for middle and high school students to foster awareness and acceptance of deceased organ donation.

From November 2023 to July 2024, the program was conducted in 21 sessions across 16 schools in Seoul, Gyeonggi, and Busan, reaching 2,333 students. A total of 1,543 students completed a post-program survey, and 1,174 responses were analyzed. The curriculum consisted of four themed sessions addressing self-respect, empathy, harmony with society and nature, and the practice of sharing. Group discussions, videos, and reflective writing were used. Qualitative text analysis was applied to survey responses.

Thematic analysis revealed improved awareness and attitudes toward brain-dead organ donation.

Key themes included:

- Recognition of the value of life (29.8%)
- Emotional engagement and empathy (23.0%)
- Increased interest in organ donation (15.3%)
- Sense of social responsibility (18.7%)

Students reported gaining new perspectives and expressed interest in becoming potential donors.

Structured youth education significantly improves awareness and perception of brain-dead organ donation. Early engagement can foster a culture of organ donation. Integration of such education into school curricula is recommended.

Keywords : brain-dead organ donation, life-respect education, youth awareness

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0692

Abstract Submission No. : APCN20250089

Landmark Six Way Simultaneous Kidney Swap Transplantation: Pioneering Experience At A Single Centre In Rajasthan

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Abstract

Objective: Live donor kidney transplantation is the predominant mode of renal transplantation in the country. Many potential donors are rejected due to ABO or HLA incompatibility. Kidney Paired Donation (KPD) can be a novel way to offset these challenges. We hereby report the first 6-way swap transplantation in the state of Rajasthan.

Methods: 6 donor-recipient pairs were selected and planned for renal transplantation. Prerequisite permission was sought and taken from the Rajasthan State authorities. 4 of the pairs were ABO incompatible and 2 were HLA incompatible.

Results: All 6 pairs underwent single centre, single day surgery on 8 May 2023. All donors were discharged by day 5 and recipients were discharged by day 10 post transplantation. There were no rejections or major complications, 1 recipient had sudden cardiac arrest 1 year post transplant due to cardiac complications but with normal graft function while rest all recipients are fine & having normal graft function as of last follow up in May 2025 (2 year post transplant) . We are a centre with experience of more than 2300 renal transplants including around 180 plus ABO incompatible and 150 plus Kidney Paired transplants. With more experience, we are doing a higher number of KPD and longer chains to match difficult to match pairs.

Conclusion: To the best of our knowledge, this is the largest chain swap transplantation in North India and one of the few in all of India. Kidney paired donation with larger chains for difficult to match recipients is potentially the single most important modality to facilitate renal transplantation and attain better outcomes for these patients.

Keywords : Swap Transplant , Kidney Transplant, HLA incompatible, ABO incompatible, Domino transplant, Paired Donation, Live donor Transplants

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0693

Abstract Submission No. : APCN20250101

TION (Tacrolimus Induced Optic Neuropathy) - A Rare Manifestation Of Tacrolimus

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Abstract

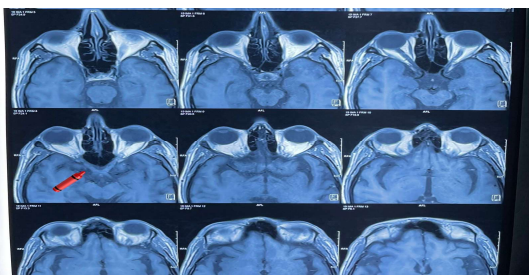
Introduction : Tacrolimus is a commonly used immunosuppressant drug in renal transplant patients. It is a calcineurin inhibitor. Common side effects include nephrotoxicity, tremors, electrolyte imbalance and headache.

Case : A 36 year old male patient with h/o on haemodialysis since 1 year under went live donor renal transplant, came with c/o blurring of vision 21 days post renal transplant which gradually progressed to bilateral blindness in next 4 days. On visual acuity examination he could only perceive light from 15cm. Optic disc margins were normal. No papilloedema or atrophy. VEP absent. Motor power was normal in both upper & lower limbs. Other systemic examinations was also normal. Serum tacrolimus levels were within normal range and s creatinine level was also in normal range. MRI s/o optic chiasma inflammation.

Result : Tacrolimus was stopped. Vision improved over next 2 months.

Conclusion : Diagnosis of TION remains difficult with variable presentation. Tacrolimus levels were normal demonstrating that TION is not related to a particular level. TION has also been reported in non transplant cases receiving tacrolimus for nephrotic syndrome which demonstrates neurotoxic properties of tacrolimus are not necessarily related to changes in metabolization after transplant.

Keywords : Renal Transplant, TION, Tacrolimus, Optic Neuropathy, Calcineurin inhibitors



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0694

Abstract Submission No. : APCN20250122

Evaluating Diltiazem-Boosted Tacrolimus in Kidney Transplant Recipients: Clinical and Economic Insights from an Asian Population

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Abstract

Introduction:

Kidney transplant recipients require lifelong immunosuppressive therapy, which can impose a significant financial burden. Previous studies suggest that diltiazem, a CYP3A4 inhibitor, may reduce the required dose of tacrolimus and thereby lower associated costs. Given the pharmacogenetic variability in tacrolimus metabolism—especially among Asian populations compared to European counterparts. Data on the clinical and cost-effectiveness of adding diltiazem in this context remain limited. This study aimed to compare clinical outcomes and cost-effectiveness between tacrolimus alone and tacrolimus plus diltiazem in newly transplanted kidney recipients.

Methods:

This retrospective cohort study included adult patients who underwent kidney transplantation at the Faculty of Medicine, Ramathibodi Hospital between 2020 and 2023. Patients who received tacrolimus at ≥ 0.1 mg/kg/day at hospital discharge were included. Participants were divided into two groups: tacrolimus alone (TAC) and tacrolimus plus diltiazem (TAC+DIL). Primary clinical outcomes included the proportion of patients achieving target tacrolimus trough levels (5–8 ng/mL) for $>60\%$ of the time and the incidence of acute rejection within one year. Cost-effectiveness was assessed using the Incremental Cost-Effectiveness Ratio (ICER). The results of clinical outcomes and cost component between groups was shown in Figure 1.

Results:

Out of 155 transplant recipients during the study period, 86 patients met the inclusion criteria (34 in TAC group, 52 in TAC+DIL group). Mean ages were 41 ± 17 years (TAC) and 39 ± 17 years (TAC+DIL). Most patients received deceased donor kidneys ($\sim 80\%$) and basiliximab as induction therapy ($>90\%$). At discharge, mean tacrolimus doses were similar between groups (6.0 ± 1.0 mg/day vs. 6.1 ± 1.6 mg/day; $P = 0.879$). Only one case of acute rejection occurred during the 1-year follow-up. The proportion of patients achieving target tacrolimus levels did not differ significantly between groups. In cost-effectiveness analysis, the ICER per additional patient achieving target tacrolimus level was €98,893.67, and the ICER per patient avoiding rejection was €988,936.58.

Conclusions:

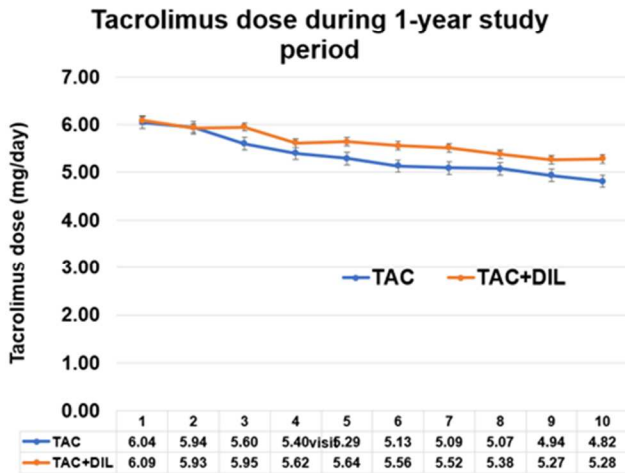
Clinical outcomes, including acute rejection and target tacrolimus attainment, were comparable between groups. However, the TAC+DIL group incurred higher overall costs, primarily driven by drug expenses. These findings suggest that while adding diltiazem may offer pharmacokinetic advantages, its cost-effectiveness remains uncertain. Further studies with larger Asian cohorts are warranted to inform economic strategies in immunosuppressant management.

Insert Figure

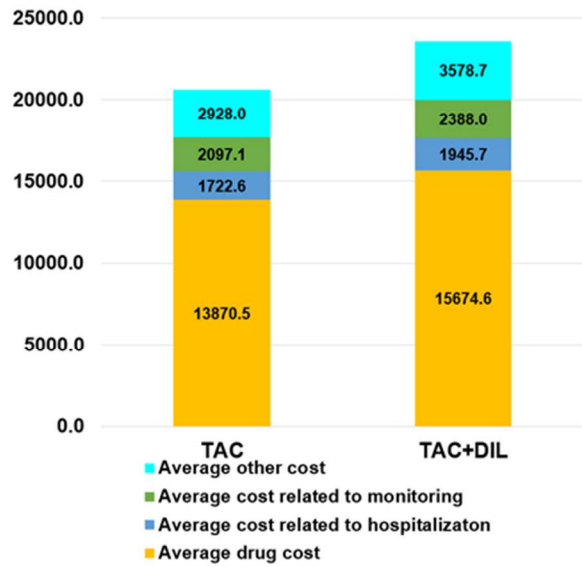
Figure 1 Clinical and Cost Effectiveness Outcomes

Keywords : cost effectiveness, diltiazem, kidney transplant, tacrolimus, trough level

Clinical and Cost Effectiveness Outcomes



Average cost (€)



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0695

Abstract Submission No. : APCN20250136

Donor-derived Glomerular Fibrin Thrombi in 1hr graft biopsy of deceased donor kidney transplant: A case report

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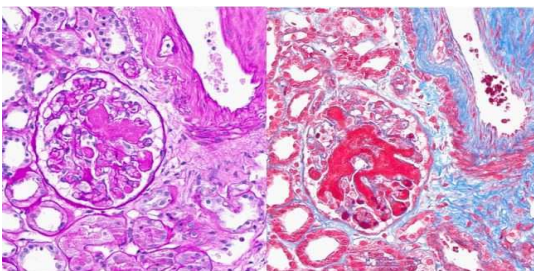
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Abstract

At our center, a protocol graft biopsy is performed one hour after renal artery declamping during deceased donor kidney transplantation (DDKT) to assess the transplanted kidney. A patient who had been on hemodialysis for 7 years due to end-stage renal disease caused by diabetes underwent DDKT with a 6/6 HLA match. The donor had suffered a traumatic subdural hemorrhage. During the surgery, a 1hr graft biopsy was performed and the patient recovered well post-surgery. However, biopsy results revealed thrombi within the glomerular capillaries, diagnosed as Acute Thrombotic Microangiopathy (TMA) (Figure 1). Despite this, the patient was stable, with normal kidney ultrasound and scan, stable urine output and serum creatinine levels of 1.2-1.3 mg/dL. Given the low likelihood of rejection, infection, or CNI toxicity, the patient was monitored without specific treatment and discharged without significant findings. A follow-up biopsy six months later showed complete resolution of the thrombi. Further investigation revealed that the initial diagnosis of TMA was incorrect, and the patient actually had Donor-derived Glomerular Fibrin Thrombi (GFT). GFT is characterized by widespread fibrin-rich microthrombi in the glomerular capillary loops, which is part of the TMA morphological spectrum, and is typically associated with disseminated intravascular coagulation (DIC) in the donor. One study found that GFT is commonly associated with severe head trauma and blunt force fatalities in the donor, and typically resolves within a few months. Although kidneys from donors with GFT may experience delayed graft function, they generally show similar renal function outcomes to controls and can be safely transplanted. Donor-derived GFT is rarely reported in Korea. Since kidneys with GFT can still be safely transplanted, this case is presented to highlight its significance in improving kidney transplant survival rates.

Keywords : Donor-derived Glomerular Fibrin Thrombi, deceased donor kidney transplant, Thrombotic Microangiopathy



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0696

Abstract Submission No. : APCN20250137

Pneumomediastinum following kidney donor nephrectomy:A case report

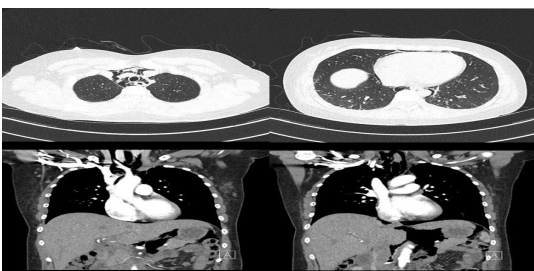
yanghyeon kim¹; arim lee¹; jiyae yi¹; heeyeon kim¹; jeongmyung ahn¹; joonseok oh¹; joongkyung kim¹

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Abstract

Pneumomediastinum is most commonly caused by the rupture of alveoli, but it can also result from air present in the respiratory airways or the digestive tract. Additionally, it may occur due to infections in various organs, trauma, or surgical complications. This case report discusses the development of pneumomediastinum three days after a left nephrectomy performed on a kidney donor for a kidney transplant. The patient is a 39-year-old female who was admitted for a left nephrectomy for kidney donation. Her height is 160 cm, weight 66 kg, and she has no underlying medical conditions. Preoperative blood tests, electrocardiogram (EKG), chest X-ray, and vital signs were all normal, and the physical examination revealed no abnormalities. General anesthesia was administered during the surgery, and there were no difficulties with intubation. The surgery lasted 2 hours and 30 minutes, during which the left nephrectomy was performed. There were no unusual events during the surgery or anesthesia process. Postoperatively, the patient complained of pain in the left flank, which improved with painkillers, and there were no other significant symptoms. On the fourth day post-surgery, the patient suddenly complained of chesttightness, neck discomfort, and chest pain. Hemodynamic signs and oxygen saturation were normal, and no abnormal findings were noted on auscultation. An EKG revealed no significant findings. Suspecting pulmonary embolism, a contrast computed tomography (CT) was performed. The CT scan showed no evidence of pulmonary embolism or aortic dissection, but diffuse pneumomediastinum was observed. As the patient's symptoms did not worsen, oxygen therapy and conservative treatment were initiated while closely monitoring her progress. On the eighth day post-surgery, the symptoms improved, and a reduction in the air within the emphysema was noted on the chest X-ray. A follow-up chest CT confirmed the complete resolution of pneumomediastinum. The patient was discharged on the 12th day post-surgery without any further complications. After a nephrectomy, air can accumulate in the retroperitoneal cavity, the space where the kidney was located. If this air is not absorbed and external factors (such as coughing, vomiting, or increased abdominal pressure) cause it to exert pressure on the alveoli in the thoracic cavity, the increased alveolar pressure can lead to alveolar rupture, allowing air to enter the mediastinum. Pneumomediastinum is a very rare complication following anesthesia or nephrectomy. This case was selected to raise awareness about the post-operative management of kidney donors, as pneumomediastinum is a rare complication following nephrectomy.

Keywords : Pneumomediastinum, kidney donor, nephrectomy



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0697

Abstract Submission No. : APCN20250163

Is Interleukin-2 Receptor Antagonist Induction Worth The Risk In Low Immunological Risk Renal Transplant Recipients? A Review Of Current Evidence

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Abstract

INTRODUCTION

KDIGO 2009 guidelines recommend that an interleukin-2 receptor antagonist (IL2-RA) be the first line induction therapy in all renal transplant recipients (Rating 1B). The recommendation was largely based on Cochrane review of 30 RCTs and 4670 patients. Recent emerging evidence in recipients receiving the standard triple immunosuppressive regimen questions the utility of IL-2RA induction in low immunological risk renal transplant recipients. The present research was conducted to analyze the emerging evidence on the efficacy & safety of IL-2RA induction in these recipients.

METHODS

A comprehensive literature search was conducted using PubMed, Scopus and Cochrane databases for studies published in last 10 years (2015-2025). All studies including randomized controlled trials, cohort studies and meta-analyses comparing IL2RA induction with no induction in low risk renal recipients were analyzed. Studies in which initial immunosuppression was different in two groups were excluded. Primary endpoints included acute rejection rates, graft survival, infection rates and patient survival.

RESULTS

There was no significant reduction in acute rejection on giving IL2-RA induction, at varying periods of three months to one year post transplant. Graft survival was also similar for periods up to five years. The rates of infection in general were non-significantly lower without IL2-RA induction and more profoundly bacterial infectious complications were significantly lower in two to six months period post transplant in the induction free group. IL2-RA did not impact the patient survival in short term as well as long term.

CONCLUSION

IL2-RA induction while using the current standard triple immunosuppressive regimen does not offer any incremental benefit in preventing acute rejection, graft and patient survival in low immunological risk kidney transplant recipients. IL2-RA induction is associated with increased infections in first year post transplant. Apart from direct financial cost of IL2-RA, the cost incurred due to hospital stay because of infections/ infectious complications need also to be taken into account while taking a call on IL2-RA use.

Keywords : interleukin-2 receptor antagonist, low immunological risk, renal transplant, acute rejection, graft survival, post transplant infection, patient survival

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0698

Abstract Submission No. : APCN20250178

Association of Tacrolimus Intra-Patient Variability and 1-Year Outcome in Kidney Transplant Patients of National Kidney and Transplant Institute from January 2016-December 2020: A Retrospective Study

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Abstract

Background: Tacrolimus, has remained as a standard immunosuppressive agent in organ transplantation, providing an effective means of preventing allograft rejection. However, tacrolimus therapy has been presented to be challenging due to its narrow therapeutic window and pharmacokinetic variability, both interpatient and intra-patient. Thus, intra-patient variability (IPV) of tacrolimus trough concentrations has been closely monitored as it has become a prognostic marker for predicting transplant outcomes.

Objective: The study was done to determine the association between intra-patient variability of Tacrolimus and outcome of kidney transplant cases in the National Kidney Transplant Institute from January 2016-December 2020.

Methods: A retrospective analysis of 1,240 kidney transplant patients was conducted and was under Tacrolimus during the study duration were included. Patients under dialysis, non-renal organ transplant recipients, patients who had graft rejection prior to the start of the study and those who had gone multiple kidney transplants were excluded. Clinico-demographic and kidney transplant profile including Tacrolimus Intra-patient variability (Tac IPV) value were utilized for evaluation. Tac IPV was calculated using the coefficient of variability (CV), while mean concentrations were derived from all Tac concentrations between 6 and 12months. The group was divided into low and high IPV based on the median value of CV in the cohort. Statistical analyses were conducted using fisher exact test to determine the association between the Tac IPV and outcome of post-transplant cases over one year.

Results: Based on the median coefficient of variation (13.4%), patients were evenly divided into low and high IPV groups (n = 620 each). High IPV was observed from younger patients, while no significant differences were noted in other baseline characteristics of the patients. High Tac IPV was associated with higher serum creatinine levels at both 6- and 12- month post-transplant. The incidence of doubling serum creatinine – a marker for declining renal function – was significantly higher in the high IPV group at both 6 months (15.81% vs. 9.68%) and 12 months (14.52% vs. 7.74%) while no significant differences were observed between the IPV groups in biopsy-proven acute rejection, proteinuria, graft survival, or patient survival.

Conclusion: High IPV was not significantly associated with acute rejection, proteinuria and one-year graft and patient survival but was correlated with increased risk of renal function deterioration. The findings underscore the significance of maintaining stable Tacrolimus exposure. Monitoring and minimizing Tacrolimus IPV may serve as a modifiable factor to improve kidney transplant outcomes.

Keywords : Tacrolimus, Rejection, Transplant

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0699

Abstract Submission No. : APCN20250242

Transplantation of the kidney and bladder en bloc in an experiment on pigs

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Abstract

Small bladder capacity is a condition that results from various congenital or acquired bladder diseases, leading to a decrease in its capacity. Small bladder is considered one of the common causes of chronic renal failure, requiring donor kidney transplantation.

A total of 40 white Landrace pigs were used in the study. Donors and recipients were from the same sow and were siblings. The animals were 4–5 months old and weighed 35–45 kg regardless of gender. The animals were divided into 20 donors and 20 recipients. The donor's left kidney with ureter and part of the urinary bladder were removed en bloc under endotracheal anesthesia. The removed organs were perfused with a cooled organ-preserving solution. The recipients underwent laparotomy, removal of the left kidney, as well as the right kidney with ureter, part of the bladder to imitate a small bladder. Then, orthotopic transplantation of the left kidney with ureter and part of the bladder was performed. Restoration of vascularization of the implanted part of the donor bladder was ensured by blood flow from the donor kidney and ureter from above and below due to the anastomosed wall of the recipient's bladder. During the operation, the animals were intravenously administered sedatives, anticoagulants, antibiotics, immunosuppressants, and glucocorticoids. To determine the survival of the transplanted organs, we determined the observation period of recipients after the operation for 10 days. After 10 days, relaparotomy was performed, the grafts were visually assessed, and tissue biopsies were taken for histological examination. The animals were then euthanized.

The survival rate among 20 recipients was: 1 recipient – 1.5 days. The cause of death was acute intestinal obstruction, 3 recipients – 3 days. The reason for early relaparotomy was anuria, acute graft rejection, 3 recipients – 5 days. The reason for early relaparotomy was deterioration of the condition due to necrosis of the bladder graft, urinary leakage. Histological examination also showed the presence of total necrosis of the implanted bladder tissue. 5 recipients survived 7 days. Of these, 1 recipient died due to intussusception, intestinal necrosis. 3 recipients underwent relaparotomy due to deterioration of their condition. The survival rate of 7 recipients was 10 days. The histological picture showed relatively satisfactory blood flow in the graft tissues.

This study showed that transplantation of the kidney, ureters and part of the bladder as a single block is feasible and has good chances for continuation of experimental work.

Keywords : Small bladder. Kidney transplantation. Bladder transplantation. Relaparotomy

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0700

Abstract Submission No. : APCN20250318

Risk of Cerebrovascular Accident Among Renal Transplant Recipients: A Systematic Review and Meta-analysis.

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Abstract

Objective:

To assess the risk of cerebrovascular accident (CVA) among renal transplant recipients.

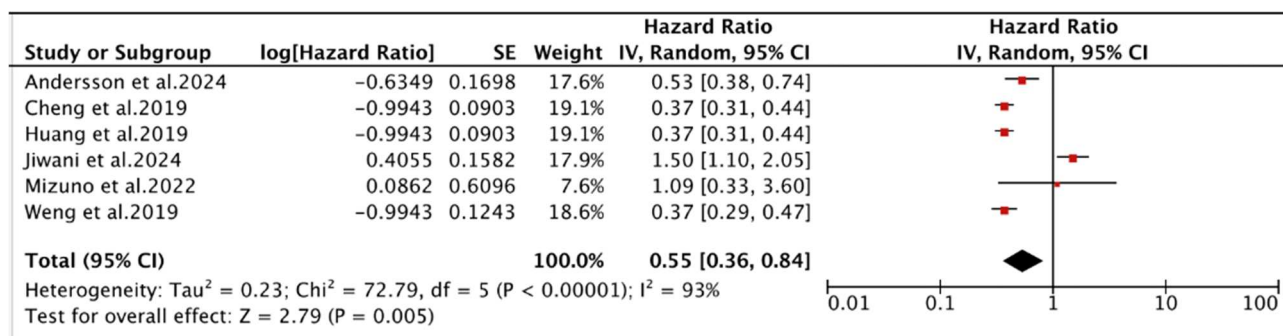
Background: Numerous studies aimed at assessing the risk of the development of CVA among renal transplant recipients ended up with conflicting conclusions. However, kidney transplantation reduces the risk of stroke compared to dialysis; transplant recipients still face a higher risk than the general population. We carried out a meta-analysis to explore the risk of CVA among renal transplant recipients.

Method: In this systematic review and meta-analysis, we screened PubMed, Embase, Google Scholar, Scopus, and Web of Science for articles until March 2025 about assessing the risk of CVA among renal transplant recipients. Data were extracted and checked by two authors for accuracy. Between-studies heterogeneity was assessed using the I^2 statistic. The summary hazard ratio and incidence of CVA among the renal transplant recipients were assessed by a 95% confidence interval (CI) using random effects models using RevMan version 5.4.

Result: A total of 26 eligible and relevant studies were included. The 20 studies were used to calculate the incidence of CVA among renal transplant recipients. There were 17,985 cases of CVA among 149,222 renal transplant recipients. The random-effects model was employed for the analysis. This meta-analysis revealed post-renal transplant stroke in 5 % of patients (95% CI, 1% - 9%, $I^2 = 99.9%$). The random-effects model was employed, and there was a statistically significantly decreased risk of CVA among post-renal transplant patients as compared to end-stage renal disease (ESRD) patients [HR = 0.55, 95% CI: 0.36 - 0.84, $p < 0.005$, $I^2 = 93%$] (Figure 1).

Conclusion: Renal transplant patients are at low risk of developing CVA as compared to ESRD or dialysis without transplant or chronic kidney disease. Further, larger randomized controlled clinical trials are warranted to validate risk analysis.

Keywords : Complication, Renal Transplant



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0701

Abstract Submission No. : APCN20250342

Snakehead Fish Extract as an Adjunct Therapy for Postoperative Wound Healing in Post-Kidney Surgery Patients

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Abstract

Background: Postoperative wound healing, particularly in patients undergoing kidney surgery, is crucial for successful recovery and preventing complications. Impaired wound healing can be exacerbated by factors such as nutritional status, inflammation, and underlying medical conditions. Snakehead fish (*Channa striata*) extract has traditionally been recognized for its potential wound-healing properties and its ability to increase albumin levels, a critical protein for tissue repair. This comprehensive literature analysis aims to investigate the efficacy of snakehead fish extract as an adjunct therapy for postoperative wound healing in post-kidney surgery patients.

Methods: A comprehensive literature review analysis was conducted using keywords "snakehead fish," "wound healing," "post operative," "albumin," and "kidney transplantation" within the Scopus database. The initial search yielded 14 articles. Further selection was based on the highest citation count and inclusion within the h-index to ensure the relevance and impact of the studies.

Results: From the initial 14 articles, several studies provided insights into the potential benefits of snakehead fish extract and factors influencing wound healing in kidney patients. Demonstrated that striatin, a bioactive protein fraction from *Channa striata*, enhanced cell proliferation and significantly accelerated wound healing in animal models, alongside faster serum albumin level recovery. Observed a significant increase in serum albumin levels in post-operative neurosurgery patients administered snakehead fish extract capsules, suggesting its role in supporting recovery. While found a possible positive effect of *C. striata* extract on albumin serum levels and neutrophil-to-lymphocyte ratio in hyperglycemic rats with wound injury, the results were not statistically significant. Other studies highlighted factors affecting wound healing in kidney patients, such as psychological stress, the impact of bariatric surgery on liver transplant outcomes including wound repair, and the lack of benefit from drain placement on wound complications after kidney transplant. The role of albumin in overall patient health and recovery was implicitly acknowledged across various studies, including its influence on tacrolimus pharmacokinetics in kidney transplant recipients.

Conclusion: Snakehead fish extract shows promise as an adjunct therapy for wound healing after kidney surgery. It may improve albumin levels and support tissue repair. While direct evidence in this specific patient group is limited, broader studies on wound healing and albumin support its potential. More targeted research is needed to confirm its effectiveness and optimal use.

Keywords : Snakehead Fish Extract, Wound Healing, Post-Kidney Surgery, Albumin, Adjunct Therapy

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0702

Abstract Submission No. : APCN20250367

Pre-Donation CT Renal Volumetry Predicts Early Remnant Kidney Dysfunction in Living Kidney Donors

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Abstract

Background:

Ensuring donor safety in living donor kidney transplantation (LDKT) necessitates a reliable prediction of post-donation remnant renal function. While CT volumetry provides an anatomical surrogate for nephron mass, its predictive accuracy for post-donation renal dysfunction remains under-explored.

Methods:

This prospective study enrolled 115 voluntary kidney donors at a tertiary care center in India. Pre-operative CT renal angiography was performed to assess cortical and total renal volumes, which were subsequently normalized to body surface area (BSA). Renal function was evaluated using 24-hour urine creatinine clearance (CrCl) and urinary albumin-to-creatinine ratio (UACR), both pre-donation and at 6 months post-nephrectomy. Post-donation remnant kidney dysfunction was defined as CrCl <60 mL/min and/or UACR \geq 30 mg/g.

Results:

At the 6-month follow-up, 21.7% of donors developed remnant kidney dysfunction, manifesting as microalbuminuria (UACR \geq 30 mg/g); no donor's CrCl fell below 60 mL/min. A significant inverse correlation was observed between pre-donation whole kidney volume-to-BSA ratio and the development of post-donation renal dysfunction ($p < 0.05$). CT volumetric parameters demonstrated superior predictive accuracy for identifying at-risk donors compared to demographic factors (age, gender, BMI). ROC curve analysis confirmed good diagnostic performance of these volumetric parameters for predicting post-donation renal dysfunction.

Conclusion:

Pre-donation BSA-normalized renal volume, measured by CT volumetry, is a strong, non-invasive predictor of early post-donation remnant kidney dysfunction in LDKT donors. Incorporating this parameter into donor screening protocols could enhance risk stratification and improve long-term donor safety.

Keywords : Kidney Donor, Creatinine Clearance, CT Renal Angiography

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0703

Abstract Submission No. : APCN20250378

Promoting Equity in Kidney Transplantation: A Policy Recommendation to Expand Kinship Criteria for Living Donation

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Abstract

Introduction

In Taiwan, the majority of patients on the organ transplant waiting list—8,540 individuals—require kidney transplantation. For patients with hereditary kidney diseases or polycystic kidney disease, biological relatives may be unsuitable donors. Expanding living donor eligibility to include in-laws could increase transplant opportunities and address concerns related to the constitutional right to health. In late 2024, legislators urged the Ministry of Health and Welfare to review and potentially revise kinship restrictions for living organ donation. This study aims to explore key considerations for such reform and to propose evidence-based policy recommendations.

Methods

In March and April 2025, two expert meetings were convened with 14 participants, including transplant clinicians (surgeons and nurses), nephrologists, gender equality specialists, legal scholars, human rights experts, and ethicists. The discussions focused on the legislative history of Article 8 of the Human Organ Transplant Act and involved comparative analyses of living donor eligibility policies in the United States, United Kingdom, Germany, and Japan. The discussion was further supported by 2023 data from the International Registry on Organ Donation and Transplantation (IRO-DaT) and an assessment of Taiwan's current transplant practices and constraints.

Results

The experts identified a significant inconsistency in Taiwan's transplant policy. While living liver donation is currently permitted from in-laws aged 18 or older, subject to ethical committee review, living kidney donation remains restricted to blood relatives aged 20 or above. In contrast, many countries have adopted broader donor eligibility frameworks based on emotional or social ties, with safeguards provided by robust ethical and psychological evaluation procedures. These models have demonstrated effectiveness in maintaining transplant safety while improving access and fairness. The panel recommended aligning Taiwan's kidney donation criteria with those applied to liver donation by: (1) permitting living kidney donations from in-laws within five degrees of kinship; (2) lowering the minimum donor age from 20 to 18; and (3) strengthening ethical and psychological screening to ensure informed consent and voluntariness. The group also emphasized the need to increase public awareness about existing provisions granting living donors priority access to transplants should they require one in the future.

Conclusion

These policy recommendations would improve access to living kidney donations, reduce dialysis dependency, alleviate public healthcare burdens, and promote fairness and sustainability in Taiwan's organ transplant system.

Keywords : kidney transplantation, living donor, kinship criteria

2023	KIDNEY		LIVER	
USA	NUM	PMP	NUM	PMP
DECEASED	22076	64.58	10854	31.75
LIVING	6418	18.78	604	1.77

2023	KIDNEY		LIVER	
Germany	NUM	PMP	NUM	PMP
DECEASED	1514	18.18	818	9.82
LIVING	608	7.3	50	0.6

2023	KIDNEY		LIVER	
JAPAN	NUM	PMP	NUM	PMP
DECEASED	248	2.01	118	0.96
LIVING	1544	12.52	352	2.86

2023	KIDNEY		LIVER	
United Kingdom	NUM	PMP	NUM	PMP
DECEASED	2438	36.01	850	12.56
LIVING	932	13.77	28	0.41

2023	KIDNEY		LIVER	
Taiwan	NUM	PMP	NUM	PMP
DECEASED	242	10.33	141	6.02
LIVING	199	8.5	366	15.63

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0704

Abstract Submission No. : APCN20250431

Kidney Transplantation in HIV : Breaking Barriers and Redefining Outcomes

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Abstract

Introduction: With approximately 42 million individuals affected by HIV/AIDS globally as of 2024, the burden of HIV-associated chronic kidney disease (CKD) continues to rise. Advances in antiretroviral therapy (ART) have significantly improved the feasibility of kidney transplantation in people living with HIV/AIDS (PLWHA). This study examines the long-term survival and post-transplant complications among PLWHA who undergo kidney transplantation.

Methods: A systematic search was conducted in PubMed, Scopus, and the Cochrane Library up to April 2025, identifying relevant prospective and retrospective clinical trials. Studies reporting on graft survival (GS), rejection rates (GR), post-transplant infections, and patient survival (PS) were included. Secondary outcomes assessed the influence of ART regimens and co-infections on transplant outcomes.

Results: A total of 632 studies were screened, with 45 meeting the eligibility criteria. The analysis showed that short-term survival in PLWHA was comparable to non-HIV transplant recipients, with one-year post-transplant survival at 93% (HR 1.35, $p=0.082$). However, long-term survival showed a decline, with five-year survival at 81% (HR 1.98, $p=0.004$). Graft survival mirrored this pattern, with one-year GS at 88% and five-year GS at 69%. Notably, integrase inhibitor-based ART regimens demonstrated a significant reduction in rejection rates (GR: HR 0.76, 95% CI 0.62–0.89, $p=0.01$) and improved long-term patient survival. Infection-related complications were twice as prevalent in PLWHA compared to non-HIV recipients, with bacterial infections being the most common cause of morbidity.

Conclusions: Kidney transplantation in PLWHA is a viable and effective therapeutic strategy, with short-term outcomes paralleling those of non-HIV transplant recipients. However, higher rejection rates and post-transplant infections remain key challenges affecting long-term graft survival. Findings suggest that tailoring ART regimens and optimizing immunosuppressive protocols could significantly enhance post-transplant outcomes. Further research is required to establish long-term survival strategies and personalized management approaches for PLWHA undergoing kidney transplantation.

Keywords : Kidney transplantation, HIV/AIDS

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0705

Abstract Submission No. : APCN20250503

The Impact of Early Vs Delayed Immunosuppression In Preventing Delayed Graft Function and Rejection Among Renal Transplant Patients, A Meta Analysis

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Abstract

Introduction: Reperfusion injury is a significant factor contributing to Delayed Graft Function (DGF) among renal transplant patients. Timely administration of immunosuppressive agents, such as Calcineurin Inhibitors (CNI) like Tacrolimus and Cyclosporine, can modulate the immune response during the critical period of reperfusion. There is growing interest in optimizing the timing of these immunosuppressants to modulate inflammation, allowing for the resolution of early post-transplant complications before initiating immunosuppression. We therefore assessed the impact of early (immediately post-transplant) versus delayed (post operative day 3 to 7) administration of immunotherapy in preventing DGF.

Methods: A systematic review and meta-analysis were performed using PubMed, Cochrane, Embase, Ovid, Web of Science, and Scopus with keywords and medical subject heading (MeSH) related to kidney transplant and immunotherapy, restricted to the English language. Randomized controlled trials comparing early versus delayed immunotherapy among renal transplant patients ages 18 years and above, involving either a living or deceased donor, with a follow up period of at least 6 months. Review studies, graft survival rates below 50%, stratification of results without consideration of DGF exposure, overlapping cohorts, and non-English articles were also excluded. The primary outcomes were the incidence of graft failure and acute rejection, while the secondary outcome included patient mortality.

Results: The study included 4 RCTs with 643 renal transplant patients from deceased or living donors. Early immunotherapy was associated with 15% lower odds of graft failure compared to those with early initiation (OR 1.21, 95% CI 0.61-2.42, P = 0.36). Early immunotherapy was associated with 25% lower odds of acute rejection compared to delayed initiation (OR 0.75, 95% CI 0.53-1.06, P = 0.36). Those receiving delayed immunotherapy had 3.88 times the odds of mortality compared to those receiving early immunotherapy (OR 3.88, 95% CI 0.63-23.96, P = 0.88). No significant heterogeneity was noted in the analysis among all outcomes.

Conclusion: The data suggest a trend favoring early initiation of CNI; however, the differences presented are not statistically significant. While the timing of immunotherapy initiation may not significantly impact DGF occurrence according to this analysis, it is crucial to consider the multifactorial nature of this complication. Factors such as patient age, comorbidities, donor type (deceased or living), and socioeconomic considerations all contribute to the overall risk profile.

Keywords : Delayed graft function, DGF, immunotherapy, Tacrolimus, Cyclosporine

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0706

Abstract Submission No. : APCN20250569

Cytomegalovirus Infection in Kidney Transplant Recipients in Taiwan: A 15-Year Single-Center Experience

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Abstract

Background: Cytomegalovirus (CMV) infection continues to be a major complication in kidney transplantation recipients (KTRs), particularly in endemic regions such as Taiwan, where seroprevalence exceeds 96% in both donors and recipients. This study evaluates a 15-year experience at Taichung Veterans General Hospital (TCVGH) regarding CMV disease incidence, timing, and the effectiveness of low-dose universal prophylaxis.

Methods: This retrospective study analyzed 367 KTRs at TCVGH from 2012 to 2024. Patients were stratified into three CMV serostatus groups: donor-positive/recipient-negative (D+/R-), recipient-positive (R+), and donor-negative/recipient-negative (D-/R-). All patients received universal CMV prophylaxis with valganciclovir (450 mg/day for more than three months), adjusted for renal function. Data collected included demographic characteristics, CMV disease incidence, leukopenia risk, graft survival, rejection rates, and mortality.

Results: Among 367 KTRs, there were D+/R- (n = 33), R+ (n = 327), and D-/R- (n = 7). The R+ group had the highest mean age (49 years), and males predominated in all groups. Leukopenia occurred most frequently in the D+/R- group (12.1% at 1 month, 15.2% at 3 months), followed by the R+ group (6.4% and 13.1%, respectively); no leukopenia was observed in the D-/R- group. The D+/R- group also had the highest one-year incidence of organ rejection (16.5%), CMV disease (2.1%), and renal failure requiring dialysis (2.1%). No such events occurred in the D-/R- group. Organ rejection was significantly more frequent in the D+/R- group (log-rank p < 0.01), although graft survival and mortality did not differ significantly between groups. CMV disease typically developed more than 3 months post-transplantation, with CMV pneumonia (n = 4, 30.8%), followed by CMV colitis (n = 3, 23.1%), CMV hepatitis (n = 3, 23.1%), isolated CMV viremia (n = 2, 15.4%) and CMV meningitis (n = 2, 15.4%).

Conclusion: Low-dose valganciclovir prophylaxis effectively reduces early CMV disease and acute rejection in KTRs. However, the persistence of breakthrough CMV infections, delayed-onset

disease, and hematologic toxicity underscores the limitations of this approach. These findings emphasize the importance of individualized, risk-adapted prophylactic strategies and support consideration of newer antiviral agents for high-risk (D+/R-) KTRs. Ongoing CMV monitoring and ensuring patient adherence remain essential to optimizing long-term graft outcomes, particularly in endemic settings.

Keywords : CMV infection, kidney transplant recipients, valganciclovir prophylaxis, leukopenia, graft rejection

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0707

Abstract Submission No. : APCN20250590

Recurrent Urinary Tract Infection In Kidney Transplant Patient

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Abstract

Introduction: Recurrent urinary tract infection (UTI) is a common complication, affecting >75% of kidney transplant recipients (KTRs). UTIs can reduce quality of life, impair graft function, and decrease patient survival. Identified risk factors include female gender, advanced age, diabetes mellitus, immunosuppressive therapy, pre-transplant UTIs, urinary tract abnormalities, and invasive urological procedures. Fosfomycin-trometamol (FT) has attracted attention as a last-resort oral therapy for lower UTIs caused by multidrug-resistant pathogens in KTRs, demonstrating good clinical efficacy but limited microbiological eradication rates.

Methods: A Case study.

Results: A 44-year-old woman with stage V chronic kidney disease who underwent renal transplantation in Cipto Mangunkusumo hospital. One-month post-transplant, she presented with dysuria and hematuria. Her past medical history included successfully treated renal tuberculosis at age 25 and a left nephrectomy one year earlier. On examination, her blood pressure was 120/72 mmHg and temperature 36.7 °C. Laboratory tests showed hemoglobin 9.5 g/dL, leukocytes 12,500/ μ L, urea 97 mg/dL, creatinine 1.09 mg/dL, estimated glomerular filtration rate 72 mL/min/1.73 m², and tacrolimus trough level 5.2 ng/mL. Urinalysis demonstrated significant hematuria and pyuria, and urine culture grew *Klebsiella pneumoniae* (>10⁵ CFU/mL) sensitive to levofloxacin, amikacin, chloramphenicol, and piperidic acid. After removal of the ureteral stent, she received two weeks course of Cefixime but symptoms temporarily resolved and Levofloxacin with complete resolution of symptoms. One month later, her dysuria and hematuria recurred, and repeat culture yielded *Escherichia coli* (1.5 \times 10⁴ CFU/mL). She was treated with Fosfomycin-trometamol 3 g orally for one week. Following this regimen, her symptoms resolved and follow-up urine culture showed no bacterial growth. Unfortunately, two months later, the same symptoms returns with the same complaint and took Amikasin 250 mg every 12 hours for a week, and the symptoms do not appear again. After taking Amikasin, the patient got uroflowmetry and the result found vesical urethral reflux and we decided a plan to do cystoscopy procedure. Before doing this procedure, we suggest the patient to take Fosfomycin-trometamol of secondary prophylaxis.

Conclusion: Fosfomycin-trometamol may serve as an effective salvage oral therapy for recurrent lower UTIs due to multidrug-resistant organisms in kidney transplant recipients. In case of recurrent urinary tract infections, the possibility of secondary prophylaxis with 3 g of fosfomycin-trometamol once a week orally for 3 to 6 months.

Clinical progress table of the patient after kidney transplantation

Follow Up	Clinical Condition	Treatment	Outcome / Progress
First	Dysuria and hematuria (positive)	Antibiotic: Cefixime (oral)	Hematuria improved, symptoms temporarily resolved
Second	Dysuria recurred	Levofloxacin (oral)	Hematuria: negative, dysuria: negative
Third	Dysuria recurred	Fosfomycin (oral)	Hematuria: negative, dysuria: negative
Fourth	Dysuria recurred	Amikacin (injection)	Hematuria: negative, dysuria: negative

Keywords : Recurrent urinary tract infection; Kidney transplant; Fosfomycin-trometamol

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0708

Abstract Submission No. : APCN20250646

Risk factors for delayed graft function in live-related kidney transplantation: A single center experience

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Abstract

Introduction

Renal failure is a global public health problem and the prevalence is increasing with increased life expectancy and raised chronic disease like diabetes mellitus and hypertension. Renal transplantation is more advantageous than alternative treatment methods in patients with end-stage renal disease in terms of survival and cost. Delayed graft function (DGF) is a manifestation of acute kidney injury (AKI) with attributes unique to the transplant process. The purpose of this study was to find out the risk factors of delayed graft function (DGF).

Methods

This was a retrospective cohort study, done from the hospital records at Dialysis and Kidney Transplant unit of Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM) General Hospital. Total 148 live related kidney transplant recipients were included in the study.

Results

Total 148 live related kidney transplant recipient were included in this study with male predominance (male 109 and female 39). Mean age of recipients and donors were 36.48 ± 10.62 and 37.49 ± 10.06 years respectively. Regarding primary disease, hypertension and diabetes were the predominant causes of chronic kidney disease. First-degree relatives (Father, mother, sister and brother) came forward to donate their kidney to their relatives. Among the recipients, 9 (6.1%) patients presented with DGF. Significant factors of DGF were lactate based perfusion fluid ($p=0.004$) and first-degree relatives ($p=0.012$). Other factors are wife as a donor, diabetes mellitus as risk factors for developing CKD. Regression analysis showed age of recipients (OR 1.100, 95% CI 1.011 - 1.197, p 0.026) and ringer's lactate perfusion fluid (OR 9.758, 95% CI 1.461 - 65.201, p 0.019) were significant risk factors for developing DGF then wife (OR 1.049, 95% CI 0.076-14.508, p 0.971) & first degree relative (OR 3.772, 95% CI 0.576-24.681, p 0.166) as a donor and induction therapy (OR 0.730, 95% CI 0.109-4.888, p 0.746).

Conclusions

Nearly six percent of live related kidney transplant recipients had DGF. Ringer's lactate perfusion fluid and older age group of recipients were the major risk factors for DGF.

Keywords : Delayed graft functions, Ringer lactate perfusion solution, HTK solution

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0709

Abstract Submission No. : APCN20250696

Triple threats in doubles - Maternal, foetal and allograft outcomes in Renal transplant recipients with pregnancy – A retrospective analysis spanning over a period of 20 years from a single quaternary care centre in South India.

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Abstract

Background: Pregnancy after renal transplant was a high-risk event. With an increasing incidence of these pregnancies over the past few decades nephrologists and obstetricians face were increasing challenges. This study aims to study the maternal, foetal, allograft outcomes in renal allograft recipients.

Methods: This is a retrospective analysis of patients who underwent renal transplant from 2004 to 2024 over a period of 15 years. Chart review of 6 recipients, 7 newborns were done, and other details were retrieved from outpatient charts and phone calls. Baseline data, laboratory values, transplant details were recorded, and outcomes were compared between planned and unplanned pregnancy groups.

Results: Out of 1384 renal transplant recipients from 2004-2024, 405 (29%) were female recipients. Only 1.72% had conceived at least once. The mean transplant age was 22.17 ± 5.39 years. All were ABO compatible and mother being donors except one who underwent deceased donor transplant. The transplant-conception Interval in planned group was 3.9 ± 1.1 years. 33.4% had HTN and 50% had preeclampsia. Only 1 patient had HELLP syndrome. 100% had preterm births. Mean birth weight (in Kg) was 1.63 ± 0.46 in planned group and 1.2 in unplanned group. 14.3% had neonatal mortality. No patients in the planned group had allograft rejection or loss. The unplanned preterm birth, though occurring at a later gestational age (30 weeks), faced greater neonatal complications and a prolonged NICU stay.

Conclusions:

1. Careful planning is needed before pregnancy, including checking kidney function and adjusting medications.
2. A thorough pre-transplant evaluation and meticulous selection of patients exhibiting stable graft function are imperative to enhance the likelihood of successful pregnancies and favourable foetal outcomes.
3. Pregnancy up to age 35 years appears to be safe in our cohort.
4. Close monitoring and surveillance of maternal BP, graft function, proteinuria is crucial for optimal outcomes.
5. We have an impending need for initiation of National Transplant Registry similar to US, UK, Australia for registering all renal allograft recipients with pregnancy to assess the pregnancy outcomes.

Keywords : Transplant, pregnancy, outcomes, maternal and neonatal mortality

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0710

Abstract Submission No. : APCN20250716

Survival Benefits of Kidney Transplantation Across All Ages, Including Patients ≥ 70 Years

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Abstract

Background and hypothesis.

Given the aging population, the number of older patients awaiting transplantation is expected to increase. Current wait-listing recommendations rely on life expectancy, comorbidities, and psychosocial factors. Healthcare providers contend with complex trade-offs in balancing medical utility versus equity. This study analyzed Taiwan Organ Registry and Sharing Center (TORSC) data from 2005 to 2024 to (i) explore survival outcomes among kidney transplant recipients (KT) and patients receiving dialysis across different age groups; (ii) determine the impact of the length of waiting time on outcomes for those who eventually receive a transplant versus those who do not; and (iii) investigate how survival rates differ by age among those who received a kidney transplant.

Methods.

The TORSC database is de-identified and publicly available, we conducted a retrospective analysis of all candidates on the waiting list or who underwent KT alone. All statistical analyses were performed using R version 4.3.1 (R Core Team, Vienna, Austria).

Results.

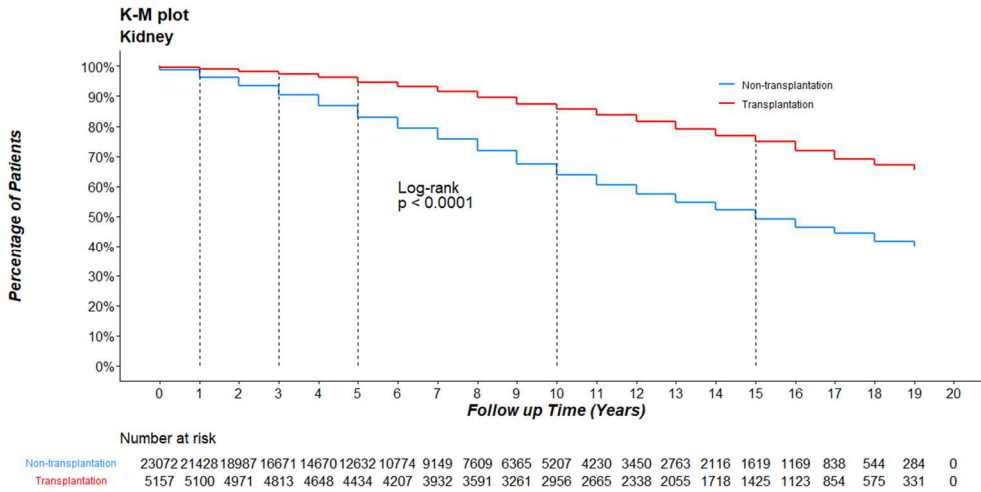
Between 2005 and 2024, 28,229 patients were registered on the kidney transplant waiting list for the first time. Among them, 5,157 (18.3%) received kidney transplants, whereas 23,072 (81.7%) did not. The patients who underwent KT had a significantly lower risk of all-cause mortality than those who did not receive a transplant (Age-AHR = 0.428, 95% CI: 0.400–0.459; $p < 0.001$). Across all age groups, patients who underwent KT consistently showed significantly higher survival rates than those who did not receive KT. In the transplant group, each additional year of waiting time was associated with decreased mortality risk (age-AHR = 0.943, 95% CI: 0.923–0.962, $p < 0.001$). In contrast, no consistent protective effect of waiting time was observed in the non-transplant group. In the transplant group, each additional year of age at transplantation was associated with a 4.7% increase in mortality risk (HR = 1.047, 95% CI: 1.041–1.054, $p < 0.001$). Regarding donor source, living donor transplantation did not show a statistically significant survival benefit compared to deceased donor transplantation.

Conclusion.

This study provides real-world evidence that KT delivers substantial survival benefit to patients

with ESRD across the age spectrum, including those aged ≥ 70 years. Prolonged waiting times are detrimental to the survival of non-transplant patients, thus reinforcing the importance of early referral and policies to promote timely transplant access. These findings support equity-driven allocation reforms and advocate for age-inclusive candidacy assessments in transplant programs.

Keywords : Age, Kidney transplantation, Outcome, Survival



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0711

Abstract Submission No. : APCN20250779

Pulse Pressure: A More Relevant Risk Factor for Graft Outcomes in Deceased Donor Kidney Transplantation than Living Donor Transplantation

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Abstract

Purpose

Pulse pressure (PP) is a hemodynamic indicator associated with arterial stiffness. However, its role in kidney transplant remains unclear, especially in the context of living donor kidney transplantation (LDKT) versus deceased donor kidney transplantation (DDKT). This study aims to investigate the impact of PP and according to donor type in kidney transplant recipients.

Methods

Total 2,504 kidney transplant patients were analyzed between 2014 and 2022 from the Korea Organ Transplantation Registry database. PP was derived from systolic and diastolic blood pressure at 1-year post-transplantation. Patients were stratified into four groups based on PP and donor type: LDKT with normal/high PP, and DDKT with normal/high PP. Primary outcomes were graft loss and mortality over an 8-year follow-up.

Results

Only high PP with DDKT group represented markedly higher graft loss (HR 2.260, 95% CI 1.183-4.317, p=0.014) and mortality (HR 2.202, 95% CI 1.098-4.417, p=0.026). Conversely, other groups showed no notable differences in graft loss or mortality. Moreover, high PP with DDKT group maintained consistently lower estimated glomerular filtration rates throughout the 5-year follow-up period. Also, DDKT group exhibited significantly higher PP compared to the LDKT group at 1-year post-transplantation, with a higher prevalence of high PP (>60 mmHg) in DDKT.

Conclusions

In DDKT, elevated PP is associated with inferior graft survival and increased mortality rates, whereas LDKT recipients show a lesser susceptibility to the effects of PP. When considering higher prevalence and impact of elevated PP in DDKT, it essentially should be considered a crucial risk factor in DDKT.

Keywords : Pulse Pressure (PP), Kidney Transplantation, Living vs. Deceased Donor, Graft Survival, Mortality Risk

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0712

Abstract Submission No. : APCN20250803

Triglyceride-glucose index and risk of renal function decline and death-censored renal allograft loss in kidney transplant recipients

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Abstract

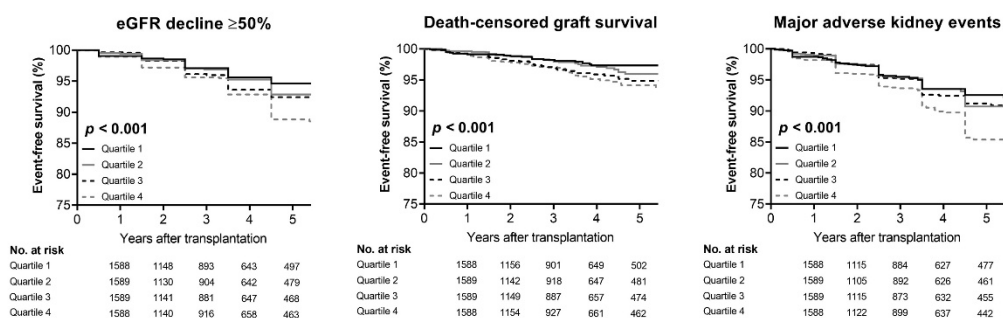
Background: Although insulin resistance is common, its significance in kidney transplant recipients remains unclear. We explored clinical implications of the triglyceride-glucose (TyG) index as a marker for unfavorable allograft outcomes in kidney transplant recipients.

Methods: 6,354 kidney transplant recipients were enrolled in multicenter prospective cohort between May 2014 and December 2022. The TyG index was assessed between 6- and 12-months post-transplantation. We evaluated the association between the TyG index and the risk of adverse kidney outcomes.

Results: The cumulative rates of $\geq 50\%$ decline in estimated glomerular filtration rate (eGFR), death-censored graft survival, and major adverse kidney events differed across TyG index quartiles, with the highest rate observed in quartile 4 ($P < 0.001$). TyG index quartile 4 was associated with the highest risk of death-censored graft loss after multivariable adjustment (adjusted hazard ratio [HR] 2.13, 95% confidence interval [CI] 1.28–3.55). The risk of $\geq 30\%$ decline in eGFR was 1.46 times higher (95% CI 1.17–1.82) in quartile 4 compared with quartile 1, and the risk of $\geq 50\%$ decline was 1.78 times higher (95% CI 1.30–2.44). Quartile 4 also showed a significantly steeper decline in renal function, with an adjusted mean difference in eGFR slope of -4.72 mL/min/1.73 m² (95% CI -7.39 to -2.04).

Conclusions: Kidney transplant recipients with high TyG index were at increased risk of eGFR decline and graft loss, and also exhibited a more rapid deterioration in renal function. The TyG index is a useful marker for identifying individuals at high risk for adverse graft outcomes.

Keywords : kidney transplantation; renal allograft survival; triglyceride-glucose index



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0713

Abstract Submission No. : APCN20250836

Successful Treatment of Iliofemoral and Renal Venous Thrombosis in Kidney Transplant Recipients Using Peripheral Rheolytic Thrombectomy: Two Case Reports

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Abstract

Iliofemoral and renal venous thrombosis are rare but serious complications that can occur in the immediate post-transplant period and often result in graft loss. Here, we report two cases of iliofemoral and renal venous thrombosis diagnosed shortly after kidney transplantation. Both patients were successfully treated with percutaneous rheolytic thrombectomy combined with localized catheter-directed thrombolysis. Renal function recovered following intervention, and no recurrent thrombosis was observed during follow-up. Peripheral rheolytic thrombectomy appears to be an effective and safe therapeutic option for iliofemoral and renal venous thrombosis in the early postoperative period, potentially reducing the need for systemic thrombolysis and preserving graft function.

Keywords : Kidney transplant, Rheolytic thrombectomy, Venous thrombosis

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0714

Abstract Submission No. : APCN20250853

Life Expectancy and Lifetime Healthcare Expenditure of Kidney Transplant Recipients in Taiwan

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Abstract

Introduction

Kidney transplantation is the most effective treatment for end-stage kidney disease (ESKD), offering improved survival and quality of life. However, in Taiwan, the number of kidney donors falls far short of demand. The limited prevalence of transplant culture may stem from a lack of understanding among patients, families, and the general public regarding its long-term health benefits and associated lifetime costs. This study aimed to estimate the potential gains in life expectancy and lifetime healthcare expenditure among kidney transplant recipients in Taiwan.

Methods

We conducted a retrospective cohort study using Taiwan's National Health Insurance Research Database. The transplant cohort included individuals who received kidney transplants between 2001 and 2017. A comparison cohort of dialysis patients was matched by age, sex, index year, and Charlson Comorbidity Index. All participants were followed until the end of 2022 to ascertain survival. Life expectancy and lifetime healthcare costs were estimated using a semi-parametric extrapolation approach with the iSQoL2 package.

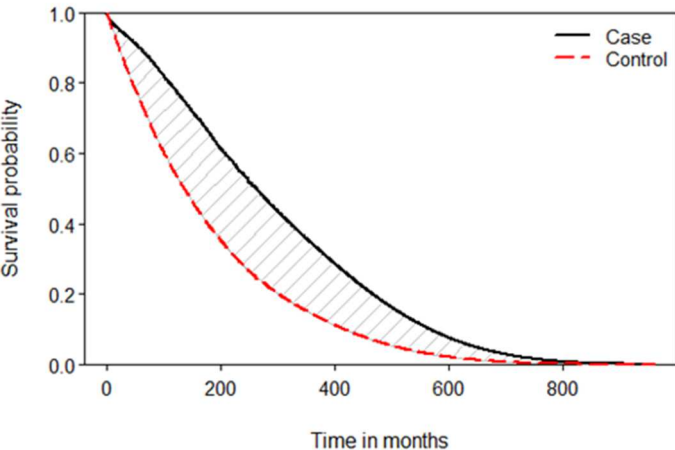
Results

The study cohorts included 6,139 kidney transplant recipients and 61,214 propensity score-matched dialysis patients. Kidney transplant recipients had an estimated life expectancy of 24.07 years (95% CI: 22.52–26.09), compared to 15.10 years (95% CI: 14.78–15.36) in dialysis patients and 36.31 years (95% CI: 36.10–36.63) in the age- and sex- adjusted general population. This corresponds to a loss of 12.23 years (95% CI: 10.27–13.80) relative to the general population, but a gain of 8.97 years (95% CI: 7.44–11.17) compared to dialysis patients. The estimated lifetime healthcare expenditure was NT\$9,026,500 (95% CI: NT\$8,320,300–NT\$10,262,300) for kidney transplant recipients and NT\$9,923,600 (95% CI: NT\$8,366,200–NT\$10,164,400) for dialysis patients, showing no statistically significant difference. However, the average annual healthcare cost was significantly lower in transplant recipients at NT\$372,100 per year (95% CI: NT\$357,100–NT\$412,300), compared to NT\$658,800 per year (95% CI: NT\$641,000–NT\$676,000) in dialysis patients.

Conclusion

Kidney transplantation substantially prolongs survival among ESKD patients without increasing lifetime healthcare expenditure. Given its survival benefit and cost-efficiency, transplantation should be prioritized as a sustainable and value-based treatment strategy in ESKD care planning and health policy.

Keywords : Kidney transplantation, life expectancy, lifetime healthcare expenditure, survival extrapolation



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0715

Abstract Submission No. : APCN20250862

Survival Disparities in Renal Cell Carcinoma Among Kidney Transplant Recipients: A 20-Year -Based Analysis from the United States

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Abstract

Introduction

Renal cell carcinoma (RCC) is more common and potentially more aggressive in kidney transplant recipients, driven by chronic immunosuppression and immune dysregulation. Despite this risk, population-level data on survival patterns in transplant-associated RCC are lacking. We conducted a comprehensive, big-data analysis to evaluate survival disparities in RCC among U.S. kidney transplant recipients compared to non-transplant patients using the SEER database.

Methods

A retrospective cohort study was performed using SEER-18 data (2000–2020). Adults (≥ 18 years) with histologically confirmed RCC were included. Kidney transplant recipients were identified via diagnostic codes and treatment annotation proxies. Primary outcomes were 5-year overall survival (OS) and cancer-specific survival (CSS). Cox proportional hazards models adjusted for age, sex, tumor stage, grade, histologic subtype, and race. Kaplan–Meier estimates were stratified by race, region, and transplant status.

Results

Among 142,300 RCC cases, 2,136 patients were identified as probable transplant recipients. The transplant group had significantly worse 5-year OS (62.1%) versus non-transplanted RCC patients (71.4%, $p < 0.001$). CSS was also reduced (67.4% vs. 75.9%, $p < 0.001$). After multivariate adjustment, transplant recipients had a higher risk of all-cause (HR 1.31, 95% CI 1.20–1.42) and cancer-specific mortality (HR 1.26, 95% CI 1.14–1.39). Black transplant recipients had the lowest OS (58.2%), and patients from the U.S. South showed regional survival disparities. Transplant recipients also had more frequent late-stage presentation and poorly differentiated tumors.

Conclusion

This nationwide analysis reveals that kidney transplant recipients with RCC experience significantly poorer survival, with striking racial and geographic disparities. Our findings call for precision oncology strategies, including tailored surveillance and earlier detection in high-risk immunosuppressed populations. Integration of transplant status into RCC prognostication tools may improve outcomes and reduce disparities across transplant nephrology and oncology care.

Keywords : Renal cell carcinoma, Kidney transplantation, Immunosuppression

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0716

Abstract Submission No. : APCN20250875

Long-Term Outcomes and Follow-Up Adherence in Living Kidney Donors: A Taiwanese Cohort Study (2010–2020)

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Abstract

Background.

Living kidney donation remains a critical strategy to address global organ shortages, with donors generally achieving favorable long-term outcomes. Taiwan has a high prevalence of chronic kidney disease (CKD) and end-stage kidney disease (ESKD), yet national data on long-term donor outcomes and adherence to follow-up care remain limited. This study evaluates the survival, ESKD risk, and follow-up adherence of living kidney donors in Taiwan.

Methods.

A retrospective cohort study of 1,116 living kidney donors (2010–2020) was conducted using the National Health Insurance Research Database. Donors aged 21–82 years were included, excluding those with pre-existing cancer or recent cancer-related surgeries. Outcomes included survival rates, ESKD incidence, renal function follow-up adherence, and risk factors for mortality and cancer. Kaplan-Meier survival analysis and Cox proportional hazards models were applied.

Results.

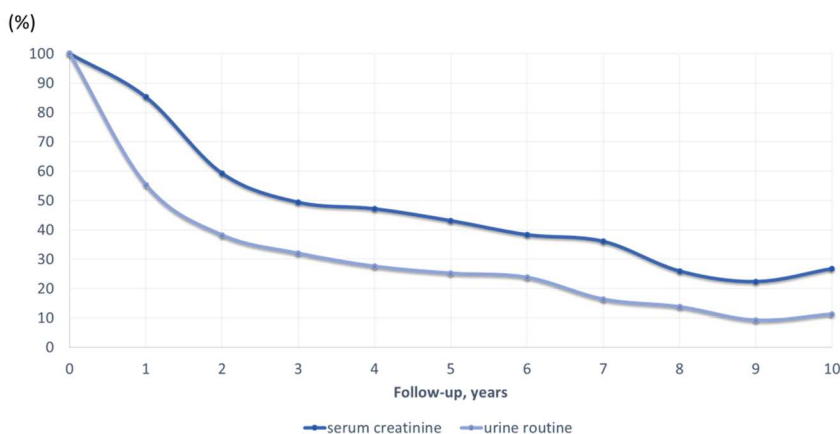
Donors exhibited excellent survival rates, with a 10-year survival of 97.37%, and no cases of ESKD requiring dialysis. Male donors had a higher prevalence of hypertension (19.8% vs. 9.3%, $P < 0.001$). Follow-up adherence declined significantly, from over 80% in the first year to 26.8% by the tenth year. Adjusted analyses did not identify statistically significant associations between CKD, hyperlipidemia, or other comorbidities and mortality or cancer risk.

Conclusion.

Living kidney donation in Taiwan is associated with excellent survival and minimal ESKD risk. Lifelong follow-up is essential to ensure sustained health outcomes. A structured national follow-up program is needed to optimize donor care and mitigate risks.

Keywords : Living kidney donor, Long-term outcomes, Follow-up adherence, End-stage kidney disease, Renal function monitoring

Figure 3, The proportion of living kidney donors who undergo annual follow-up for renal function and urine tests after kidney donation.



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0717

Abstract Submission No. : APCN20250886

Post-Transplant Malignancy in Kidney Transplant Recipients: A 15-Years Cohort Study Highlighting the Burden of Urothelial Carcinoma

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Abstract

Background: Post-transplant malignancy (PTM) is a significant long-term complication in kidney transplant recipients (KTRs), contributing to increased morbidity and mortality. Immunosuppressive therapy is essential for graft survival, but it may increase the risk of de novo malignancies. In Taiwan, upper tract urothelial carcinoma (UTUC) and urothelial carcinoma of bladder (UC) are disproportionately prevalent among KTRs, raising concern over the carcinogenic potential of long-term immunosuppression used. This study was conducted to evaluate the incidence of cancer, patterns of histologic distribution, and associated risk factors and outcomes, including immunosuppressant regimens among Taiwanese KTRs.

Methods: We retrospectively analyzed 195 kidney transplant recipients at a tertiary center in Taiwan from year 2005 till year 2020. The incidence rates and standardized incidence ratios (SIRs) of all PTMs, particularly UTUC and UC, were calculated. Immunosuppressive exposure was evaluated as association with malignancy risk. Cox proportional hazards models were used to identify independent predictors of UTUC/UC.

Results: A total of 29 malignancy events were documented, including 8 cases of UTUC/UC (4.1%). The overall cancer incidence rate was 2.01 per 100 person-years. Females had a higher incidence rate than males (2.41 vs. 1.62) and a notably elevated SIR (4.65 vs. 2.68). However, the sex difference was not statistically significant (HR = 1.41, $p = 0.595$). The highest cancer incidence occurred in the 50–59 age group (2.72 per 100 person-years). UTUC was the most frequent PTM, with a combined UTUC/UC incidence rate of 0.73 per 100 person-years ($p < 0.001$), followed by liver cancer (0.73 per 100 person-years, $p = 0.717$). Among patients with UTUC/UC, the majority received standard triple therapy including calcineurin inhibitors (CNIs), mycophenolate mofetil (MMF), and corticosteroids. Malignancy was the leading cause of death, accounting for 33.3% of all mortality in this cohort, followed by glomerulonephritis (12.5%) and cerebral vascular events (6.25%). Progression-free survival analysis revealed that transplant vintage >10 years was the only factor significantly associated with poorer outcomes (Log-rank $p = 0.036$), while age, sex, and immunosuppressant type showed no significant impact on survival curves.

Conclusions: This study highlights a high burden of post-transplant malignancy in Taiwanese KTRs, with UTUC/UC exhibiting a striking female predominance. While immunosuppressive agent class did not independently predict malignancy, prolonged post-transplant duration (>10 years) significantly impacted cancer progression. These findings support tailored, long-term cancer surveillance strategies, particularly for female recipients and those beyond a decade post-transplantation.

Keywords : Kidney transplantation, urothelial carcinoma, post-transplant malignancy, immunosuppression, outcomes

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0718

Abstract Submission No. : APCN20250941

COVID-19 outcomes in kidney transplant recipients: a retrospective single center case -control study

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Abstract

Background: Kidney transplant recipients (KTRs) are vulnerable to respiratory viral illnesses, such as COVID-19 due to their chronic immunosuppression, comorbidities and frequent hospital contact. However, a few studies so far have shown inconsistent outcomes in KTRs compared to non-transplant patients.

Methods: This was a retrospective case-control study conducted at our tertiary care center in which we compared the outcomes of hospitalized KTRs (Cases, n=50) who were diagnosed with COVID-19 between 30 January 2021 and 15 March 2021 based on a positive test by reverse transcriptase polymerase chain reaction (PCR) with hospitalized age and sex matched COVID-19 positive controls (n=50). The primary outcome was death and the secondary outcomes were the need for repeat hospital admission and the length of hospital stay.

Results: A total of 100 COVID-19 patient (50 cases and 50 controls) were enrolled in the study. In the controls, the proportion of females was higher (58.8%–10/17), while in the cases, the percentage of men was higher (51.8%–43/83). There were discernible differences between the cases and controls in hospital stay duration (p =0.00). In contrast to the case group, where 35 survived, in the control group 48 survived. There were significant mortality differences between the cases and controls (p = 0.00). At admission, there was a substantial decrease in neutrophils, lymphocytes, PT, total bilirubin, and direct bilirubin (p < 0.05). On the other hand, at the time of admission, INR, albumin, sodium, potassium, and ALP were all considerably greater than those of the controls (p<0.05) At the time of discharge, we found a significantly lower TLC, Neutrophils, total bilirubin, direct bilirubin and LDH in cases (p <0.05).

Conclusion: COVID-19 infection in KTRs causes discernible longer hospital stays and higher mortality. The investigation of biochemical parameters might help in earlier identification and timely intervention. However, further large-scale studies are required to understand COVID-19-associated changes in clinical-biochemical parameters.

Keywords : COVID-19, kidney transplant, outcomes, SARS-CoV-2

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0719

Abstract Submission No. : APCN20250948

New-Onset Diabetes After Kidney Transplantation With mTOR-Inhibitors Induction Therapy: A Systematic Review and Meta-analysis

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Abstract

Introduction

The mammalian target of rapamycin inhibitors (mTOR-I) has been a widely chosen regimen in kidney transplantations. Drugs that inhibits the mTOR pathway might contribute to the development of NODAT due to the inhibition of cellular metabolism and various biological functions. Therefore, we aimed to investigate the relative risk of New-Onset Diabetes After Transplantation (NODAT) in kidney transplant patients with mTOR-Inhibitor regimens.

Methods

Systematic searches were performed across three databases (Karger, Sagepub, and ProQuest). Studies were then screened based on the inclusion and exclusion criteria: original research articles published within the last five years involving adult patients undergoing kidney transplantation. Studies were excluded if they were conducted on animal models, involved pediatric populations, or focused on transplantations other than the kidney. Data on the use of mTOR-inhibitors and the incidence of new-onset diabetes after transplantation (NODAT) were extracted and pooled using the Mantel-Haenszel method. From an initial total of 4,392 samples, 6 studies met the eligibility criteria and were included in the final analysis.

Results

The meta-analysis of 6 studies (n = 6,164) shows no significant association between the usage of mTOR-inhibitor as induction therapy with the increased risk of NODAT compared to other therapies (OR: 1.11; 95% CI: 0.96–1.29; p=0.16). Heterogeneity was low (I² = 16%).

Discussion

Although some of the individual studies have showed a trend toward increased risk, the overall pooled result was not statistically significant. This suggests that mTOR inhibitors may not have a clinically meaningful impact on NODAT development.

Keywords : New-Onset Diabetes After Transplantation (NODAT), m-TOR Inhibitors, Kidney Transplantation, Induction Therapy, Immunosuppressant

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0720

Abstract Submission No. : APCN20250952

Basiliximab vs. Other Induction Agents and the Risk of Post-Transplant Diabetes in Kidney Recipients: A Systematic Review and Meta-analysis

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Abstract

Introduction

New-onset diabetes after transplantation (NODAT) is defined as the occurrence of diabetes mellitus after a solid organ transplantation in individuals that are previously non-diabetic. NODAT is a common complication, and studies have shown an association of NODAT with increased morbidity and mortality rates. In this study, we aimed to identify Basiliximab induction therapy as a risk factor of developing NODAT.

Methods

Systematic searches were conducted across five databases: ClinicalTrials, EBSCO, ProQuest, PubMed, and Taylor & Francis. Studies were selected based on the predefined eligibility criteria of original research articles involving adult patients who underwent kidney transplantation, published within the last five years. Exclusion criteria included studies conducted on animal models, pediatric populations, and transplant procedures other than kidney. Data regarding basiliximab use and the incidence of new-onset diabetes after transplantation (NODAT) were extracted and synthesized using the Mantel-Haenszel method. Of the 477 articles, four met the criteria and were included in the final analysis.

Results

A total of 4 studies (n=8,073) were analyzed. The usage of Basiliximab as the induction therapy in kidney transplant patients is significantly associated with an increased risk of new-onset diabetes after transplantation (OR 1.75; 95% CI: 1.26–2.42; P = 0.0008) with moderate heterogeneity observed ($I^2 = 51\%$).

Conclusion

Risk of NODAT is increased in kidney transplant patients with Basiliximab induction therapy compared to other therapy regimens. Despite moderate heterogeneity, significant pooled effect and consistent trends in the studies strengthen the likelihood of a clinically meaningful association. This highlights the need for caution in the use of basiliximab, particularly in patients at high risk for post-transplant diabetes, as well as the importance of a more personalized immunosuppressive approach.

Keywords : New-Onset Diabetes After Transplantation (NODAT), Basiliximab, Kidney Transplantation, Induction Therapy, Immunosuppressant

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0721

Abstract Submission No. : APCN20250961

Epidemiology, Clinical Characteristics, and Survival Outcomes of Nontuberculous Mycobacterial Infection in Kidney Transplant Recipients: A Real-World Propensity Score–Matched Cohort Study

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Abstract

Background:

Nontuberculous mycobacterial (NTM) infection is a rare but increasingly recognized complication among kidney transplant (KTx) recipients. This study aimed to evaluate its clinical characteristics and long-term outcomes using real-world data.

Methods:

We queried the TriNetX Global Collaborative Network (2005–2025) to identify adult KTx recipients diagnosed with NTM infection (n = 683). A 1:1 propensity score–matched cohort of KTx recipients without NTM or tuberculosis (non-NTM controls) was generated. Patient demographics, comorbid conditions, infection sites, and survival outcomes were compared.

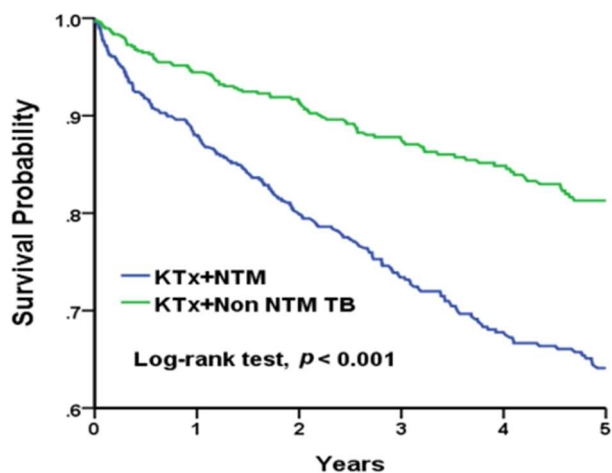
Results:

Pulmonary NTM was the most common form (50.2%), followed by disseminated (12.5%) and cutaneous (10.4%) infections. After matching, patients with NTM infection exhibited a significantly higher prevalence of diabetes (45.7% vs. 21.3%), heart failure (24.0% vs. 7.6%), and chronic lung disease (31.0% vs. 9.9%) compared to controls. All-cause mortality was substantially higher in the NTM group at 1, 3, and 5 years, with adjusted hazard ratios of 2.25, 2.31, and 2.21, respectively. Kaplan–Meier analysis showed significantly reduced 5-year survival among NTM patients (log-rank $p < 0.001$).

Conclusions:

NTM infection in kidney transplant recipients is associated with a greater burden of comorbidities and significantly worse survival compared to matched non-NTM controls. These findings highlight the need for early recognition and proactive management in high-risk transplant recipients.

Keywords : • Nontuberculous mycobacteria (NTM) • Kidney transplantation • Opportunistic infection • Propensity score matching • Comorbidity burden • Post-transplant infection • Long-term survival • Real-



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0722

Abstract Submission No. : APCN20250963

Clinical Features and Survival Outcomes of Tuberculosis in Kidney Transplant Recipients: A Real-World Propensity Score–Matched Cohort Study

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Abstract

Background:

Kidney transplant (KTx) recipients are at elevated risk of tuberculosis (TB) due to chronic immunosuppression. We aimed to evaluate the clinical manifestations, TB site distribution, and long-term survival outcomes in this high-risk population.

Methods:

We analyzed data from the TriNetX Global Collaborative Network (2005–2025) and identified adult KTx recipients diagnosed with TB (n = 1,018). A 1:1 propensity score–matched (PSM) cohort was constructed using KTx recipients without TB (n = 1,018), matched on demographics and baseline comorbidities. TB types and survival were compared between groups.

Results:

Among TB-infected KTx recipients, pulmonary TB was the most common presentation (64.1%), followed by extrapulmonary (27.7%) and disseminated forms (5.6%). Compared with matched controls, TB patients had higher rates of diabetes (39.8% vs. 20.6%), ischemic heart disease (25.0% vs. 12.4%), and chronic lung disease (15.7% vs. 7.4%) prior to matching. After matching, baseline characteristics were well balanced (SMD < 0.05 for all variables). All-cause mortality at 1, 3, and 5 years remained significantly higher in the TB group, with a 5-year hazard ratio of 1.48 (95% CI: 1.16–1.88). Kaplan–Meier analysis demonstrated significantly lower 5-year survival in TB patients (log-rank p = 0.001).

Conclusions:

Tuberculosis in kidney transplant recipients is associated with diverse clinical manifestations and significantly increased long-term mortality, even after adjusting for comorbid conditions. These findings underscore the need for early diagnosis and close post-transplant monitoring to improve outcomes in this vulnerable population.

Keywords : • Kidney transplantation • Tuberculosis • Propensity score matching • Post-transplant infection • Survival analysis • Real-world data • Immunosuppression • Clinical outcomes

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0723

Abstract Submission No. : APCN20251014

PDGF-BB: A Novel Marker of Kidney Graft Health Beyond Vascular

Remodeling

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Abstract

Background/Aim: Serum platelet-derived growth factor-BB (PDGF-BB) is involved in vascular remodeling, fibrosis, and atherosclerosis. We aimed to evaluate PDGF-BB levels in relation to intrarenal resistive index (RI) and carotid intima-media thickness (CIMT), assessing its potential as a post-transplant marker of atherosclerosis and graft survival.

Patients and Methods: In this prospective cross-sectional study, 88 renal transplant recipients (≥ 1 year post-transplant) followed at Ankara Bilkent City Hospital between April and May 2025 were enrolled. Serum PDGF-BB was measured by ELISA. RI and CIMT were assessed via duplex Doppler ultrasonography. Spearman's rank correlation analysis was performed, with $p < 0.05$ as the threshold for statistical significance.

Results: Participants' median age was 50 years (range: 18–70); 45.5% were female. Median serum PDGF-BB level was 230.6 pg/mL (109.9–2454), median CIMT was 0.78 mm (0.37–1.70), and median RI was 0.67 (0.51–0.84). No significant correlations emerged between PDGF-BB and RI ($r = 0.009$; $p = 0.931$) or PDGF-BB and CIMT ($r = -0.021$; $p = 0.874$). However, PDGF-BB correlated negatively with estimated glomerular filtration rate (eGFR) ($r = -0.270$; $p = 0.012$).

Conclusion: Among kidney transplant recipients, higher PDGF-BB levels were associated with lower eGFR but showed no significant relationship with CIMT or RI. These findings suggest that PDGF-BB may influence post-transplant vascular remodeling and fibrosis indirectly. Large, multi-center studies are needed to confirm these observations and determine their clinical relevance.

Keywords : Renal transplantation; Platelet-derived growth factor-BB (PDGF-BB); Intrarenal resistive index (RI); Carotid intima-media thickness (CIMT); Graft survival.

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0724

Abstract Submission No. : APCN20251017

Assessment of efficacy of a SGLT2 inhibitors in kidney transplant recipients with diabetes

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Abstract

Background: Cardiovascular disease is a major contributor to graft loss and mortality in renal transplant patients. Sodium-glucose cotransporter-2 (SGLT2) inhibitors may offer benefits in this population, but they are not routinely recommended, and limited studies have examined their use in renal transplant recipients.

Methods: This single-center, 12-month study included 113 renal transplant patients with post-transplant diabetes mellitus (PTDM) who attended outpatient clinics. Participants were randomized into two groups: Dapagliflozin group (n=59): Received dapagliflozin 10 mg daily alongside ongoing anti-diabetic medications.

Control group (n=54): Continued their standard anti-diabetic regimen with dose adjustments based on HbA1c levels. Baseline and follow-up measurements at 6 and 12 months included fasting and postprandial blood glucose, glycated hemoglobin (HbA1c), serum creatinine, urine routine examination, and albumin-creatinine ratio (ACR).

Results: HbA1c Reduction: Both groups achieved a similar reduction in HbA1c (0.78% in the dapagliflozin group vs. 0.83% in the control group, $p > 0.05$). Urine ACR and eGFR: There was no statistically significant difference in the mean reduction of urine ACR or changes in eGFR between the two groups over 12 months.

Adverse Events: Acute kidney injury was rare and observed only in hospitalized patients. The incidence of urinary tract infections (UTIs) was approximately 10% in both groups. Recurrence led to discontinuation of dapagliflozin in four patients, but none with genital infections (6.8% in the dapagliflozin group vs. 5.5% in the control group). No cases of rejection, diabetic ketoacidosis, or significant hypotension were reported.

Conclusions: Dapagliflozin demonstrated a modest reduction in HbA1c but was less effective in reducing proteinuria. It did not significantly impact transplant function or eGFR and had a comparable safety profile to other anti-diabetic medications.

Keywords : Sodium-glucose cotransporter-2 inhibitors, dapagliflozin, HbA1c

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0725

Abstract Submission No. : APCN20251018

Profile of avascular necrosis cases among kidney transplant recipients on a low-dose steroid regimen, A Retrospective Study

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Abstract

Objective: To assess the clinical profile, biochemical parameters and outcomes of kidney transplant recipients who developed avascular necrosis while on a low-dose steroid regimen.

Method: The descriptive, cross-sectional study was conducted from January to December 2022 at the Renal Transplant Unit of the Dow University of Health Sciences, Karachi, and comprised data on kidney transplant recipients diagnosed with avascular necrosis between March 2017 and December 2022. Data on demographics, biochemical markers, steroid protocols, joint involvement, diagnostic techniques, rejection episodes and surgical interventions was collected. Data was analysed using SPSS 27.

Results: Of the 30 patients, 21(70%) were males and 9(30%) were females. The overall mean age was 37.23 ± 8.62 years (range: 24-60 years). Avascular necrosis diagnosis was confirmed by magnetic resonance imaging scan in 28(93.3%) cases. Surgical intervention was required in 8(26.7%) patients. Rejection episodes were 16(53.3%) in the first six months, while 14(46.7%) developed avascular necrosis without prior rejection ($p=0.689$). A significant correlation was observed between gender and surgical intervention, with females more likely to require surgery compared to males ($p=0.032$).

Conclusion: Female patients showed a higher likelihood of requiring surgical management, highlighting the importance of gender-sensitive orthopaedic monitoring post-transplant.

Keywords : Avascular necrosis, Kidney transplant, Low-dose steroid, Surgical intervention, Orthopaedic outcomes.

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0726

Abstract Submission No. : APCN20251084

Determining Optimal Strategy Employing Antithymocyte Globulin (DOSE-ATG) as Induction Therapy among Filipino Kidney Transplant Recipients: A Retrospective Cohort

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Abstract

Introduction: End-stage renal disease (ESRD) is one of the leading causes of morbidity and mortality worldwide. Kidney Transplant (KT) remains to be the gold standard for all renal replacement therapies for ESRD. The transplant process includes induction therapy with an immunosuppressant. One of the most widely used induction agents is rabbit antithymocyte globulin (rATG). Induction therapy is done to prevent acute rejection, which in effect prolongs allograft and patient survival. The study aimed to determine the mean cumulative dose of rATG induction therapy among Filipino kidney transplant recipients (KTRs).

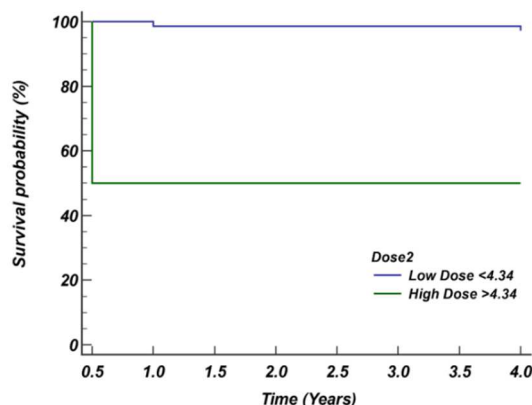
Methods: A retrospective cohort was conducted among 73 adult Filipino KTRs who underwent living donor kidney transplant at a tertiary medical center from 2016–2020. Patients were categorized into low- and high-dose rATG groups based on the mean cumulative dose (2.81 mg/kg). Outcomes assessed included renal function, delayed graft function, acute rejection clinically and biopsy proven (BPAR), infection, malignancy, death censored graft failure (DCGF), and death with functioning graft (DWFG). Statistical analysis included Kaplan-Meier survival curves, Cox regression, and odds ratio estimation.

Results: There were no statistically significant differences between the low- (≤ 2.80 mg/kg) and high-dose (> 2.80 mg/kg) groups in terms of acute rejection, DGF, DCGF, infection, or malignancy. However, a receiver operating characteristic (ROC) curve derived threshold dose of > 4.34 mg/kg was found to be significantly associated with reduced patient survival (HR 27.6, $p = 0.0075$).

Conclusion: The mean cumulative dose of rATG in this cohort was 2.81 mg/kg, which is lower than the standard and high dose groups in similar East and South Asian Studies in recent literature where high dose was identified to be greater than 4.5 mg/kg. The ROC-derived threshold dose of > 4.34 mg/kg (HR 27.6, $p = 0.0075$) can be used as an upper dosing limit for safe induction therapy among Filipino KTRs. A larger, multi-center study in the Philippines, specifically in Kidney Transplant Centers, can be done to compare and validate results of this study.

Keywords : Kidney Transplant, Transplantation Immunology, Antithymocyte Globulin, ATG, rATG, Induction therapy, Immunosuppression, Filipino

Figure 1b. Kaplan Meier Curve - Allograft Function, Survival, and Patient Survival at Higher cut-off cumulative dose > 4.34



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0727

Abstract Submission No. : APCN20251087

Renal Transplantation in Elderly Patients Aged 65 Years and Older: Short-Term Clinical Outcomes from a Single Center Experience

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Abstract

Introduction. Age per se should not be a contraindication to kidney transplantation. The first studies have shown a benefit for the survival of elderly eligible patients getting a kidney transplant compared to be maintained on the waiting list. However, more recent data suggest that this benefit is not as constant, notably with a significant early mortality period. In this retrospective single-center study we evaluated the short-term outcome after kidney transplant in recipients older than 65 years in terms of patient and graft survival and causes of death.

Methods. From 2014 to 2024, 123 consecutive transplanted recipients older than 65 years were included. Recipient characteristics were analyzed: sex, age, cause of CKD, duration of dialysis, time in waiting list. There were other parameters cold and warm ischemia times, number of mismatches, delayed graft function, biopsy-proven acute rejection, and causes of death and number of rejections in the first 3 months after transplantation. Induction immunosuppressive therapy was performed with basiliximab or thymoglobulin. Baseline triple immunosuppression included calcineurin inhibitor, antimetabolite, and steroids.

Results. The median age was 68 years (interquartile range: 66–71), and the percentage of males was 54.4%. The main causes of chronic kidney disease (CKD) were chronic glomerulonephritis (29.3%), arterial hypertension (17.9%), and diabetes mellitus (13.8%). Overall mortality in the first three months was 27.6%. Causes of death included infections (87%), cardiovascular disease (10%), and cerebrovascular disease (3%). At three months, overall graft survival was 89%. A comparative analysis between the group of survivors and those who died within the first three months after transplantation indicated that the duration of dialysis was a statistically significant factor associated with an unfavorable outcome ($p=0.001$), while a greater number of mismatches (greater than 2) determined the risk of death ($p=0.059$).

Conclusion. In our single-center study, kidney transplantation in patients older than 65 years was feasible, with a total mortality rate of 27.6% at three months after the operation. Infection was the main cause of unfavorable outcomes. Additionally, the duration of dialysis before kidney transplantation was associated with patient mortality following the operation.

Keywords : elderly patients, kidney transplantation, outcome, cause of death

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0728

Abstract Submission No. : APCN20251110

Risk Factors and Clinical outcomes for BK Virus Infection in Renal Transplant Recipients: A 12 Year Cohort Study from South India

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Abstract

Introduction:

BK virus-associated nephropathy (BKVAN) remains a significant cause of renal allograft dysfunction and graft loss, particularly in the absence of approved antiviral therapy. Early detection through surveillance and timely modulation of immunosuppression are essential for prevention and management.

Aim:

To evaluate the incidence, risk factors, and clinical outcomes of BK viremia and BKVAN in a cohort of kidney transplant recipients from a high-volume South Indian centre.

Methods:

This was a retrospective cohort study of 724 renal transplant recipients between 2011–2022 at a tertiary care centre. BK viremia was defined as a plasma BK viral load >100 copies/mL. BKVAN was diagnosed on histopathology. Clinical and laboratory parameters were compared across groups using standard statistical methods.

Results:

BK viral replication was detected in 124/724 patients (17.1%), with 107 (14.8%) having isolated BK viremia and 17 (2.3%) progressing to BKVAN. BKVAN patients exhibited significantly higher peak viral loads (14,295 vs 671 copies/mL, $p < 0.05$) and delayed onset (6 months vs 3 months post-transplant). Risk factors for BKVAN included younger recipient age (30 ± 9.4 vs 38.2 ± 12.0 years, $p = 0.047$) and shorter dialysis vintage (4.5 vs 9 months, $p = 0.049$). Among patients with viremia but no nephropathy, immunosuppression modulation was associated with higher (though not statistically significant) rates of viral clearance (72.8% vs 50.0%, $p = 0.42$). Graft survival was numerically lower in BKVAN patients, though patient survival was similar across groups.

Conclusions:

In this real-world cohort, BKVAN remains a serious complication with inferior graft outcomes. Vigilant monitoring and early immunosuppression reduction are key, particularly in younger recipients and those with early post-transplant viremia.

Keywords : BK virus, nephropathy, renal transplant, immunosuppression, graft survival

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0729

Abstract Submission No. : APCN20251149

Histological Injury Can Be Present Even in Clinically Low-Risk Kidney Donors

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Abstract

Background:

Donor organ quality is a key determinant of transplant outcomes. At our center, extended criteria donors (ECD) undergo explant biopsy with Remuzzi scoring to guide allocation; scores ≥ 4 , indicating chronic changes, often prompt dual-kidney transplantation. In contrast, standard criteria donors (SCD) are typically allocated to younger recipients without pre-transplant biopsy, potentially missing significant pathology. Given the cost, complexity, and variability of biopsy assessment, predicting histological findings from baseline donor characteristics could streamline evaluation and improve consistency in organ assessment for both deceased and living donors.

Methods:

We retrospectively reviewed all kidney transplants from January 2023 to November 2024 in which grafts underwent day 0 biopsy—either explant (pre-donation) or implant (at reperfusion). Per institutional protocol, all deceased donors (DDKT) and living donors (LDKT) aged ≥ 60 years undergo implant biopsy. Baseline donor characteristics were manually collected. Histological findings, including Remuzzi scores, were recorded. Regression analysis was used to evaluate associations between donor characteristics and Remuzzi scores.

Results:

Clinical characteristics are summarized in Table 1. Among 26 kidney donors (14 SCD, 6 ECD, 6 living), notable clinical and histological differences were observed. ECD were older, more frequently hypertensive (83.3%), and had the highest mean KDPI (74.2%), with one-third $\geq 85\%$. SCD were younger, with lower KDPI (32.5%) and no diabetes, but higher rates of smoking and proteinuria at donation. Living donors were older and 50% were hypertensive. Kidney function and cyst prevalence were similar across groups. Median Remuzzi scores were comparable (3–4), with a substantial proportion in each group scoring ≥ 4 : 50% in ECD, 43% in SCD, and 33.3% in living donors. Of all baseline characteristics, only higher BMI was significantly associated with higher Remuzzi scores ($p=0.02$); age, KDPI, hypertension, and other variables were not.

Conclusions:

Despite lower comorbidity profiles, SCD may still harbor significant chronic histological changes. In contrast, some ECD demonstrated minimal chronic injury on biopsy. Higher BMI was independently associated with greater histological injury, whereas commonly used metrics such as KDPI, age, and hypertension were not. While the sample size was small, these findings highlight the limitations of KDPI and other baseline characteristics in predicting histological changes. Larger studies incorporating more detailed clinical, laboratory, and imaging data are needed to improve predictive models and support more accurate, biopsy-sparing donor assessment.

Keywords : Kidney donor; Standard criteria donor; Extended criteria donor; KDPI

Donor characteristics	Standard criteria donor (n = 14)	Extended criteria donor (n=6)	Living donor (n = 6)
Age (years), mean (SD)	41.1 (10.3)	58.1 (4.7)	64.3 (6.2)
Sex Male, No. (%)	7 (50%)	2(33.3%)	2 (33.3%)
Chinese ethnicity, N (%)	11 (78.6%)	5 (83%)	5 (83%)
Death from cerebrovascular disease (CVA), N (%)	9 (64.3%)	6 (100%)	Not applicable
Extended criteria donor ¹ , N (%) -single-kidney allocation -dual-kidney allocation	Not applicable	3 (50%) 3 (50%)	Not applicable
Diabetes mellitus, N (%)	0 (0%)	1 (16.7%)	0 (0%)
Hypertension, N (%)	2 (14.3%)	5 (83.3%)	3 (50%)
Smoking history, N (%)	4 (28.6%)	0 (0%)	1 (16.7)
Left ventricular hypertrophy ² by EKG or Echo	5 (35.7%)	1 (16.7%)	0 (0%)
BMI (kg/m ²), mean (SD)	25.8 (6.8)	25.1 (4.7)	23.9 (2.7)
Kidney donor profile index (KDPI) %, mean (SD) -KDPI ≥85%	32.5 (16.2) 0 (0%)	74.2 (17.2) 2 (33.3%)	40.8 (17.7) ³ 0 (0%)
Creatinine (μmol/L), mean (SD) -Terminal creatinine -Best creatinine	73.5 (26.3) 69.3 (24.4)	74.2 (32.9) 69 (30.8)	Not applicable 66.3 (7.0)
Proteinuria (>0.5g/g or dipstick 1+), No. (%)	7 (50%)	1 (16.7%)	0 (0%)
Kidney Cysts on imaging and/or gross inspection	3 (21.4%)	2 (33.3%)	2 (33.3%)
Histology			
Glomerulosclerosis %, median (interquartile range)	5.0 (2.1–13.5)	8.5 (0-16.7)	13.4 (6.8–17.5)
Remuzzi glomerulosclerosis score >0	10 (71%)	5 (83.3%)	5 (83.3%)
Remuzzi tubular atrophy score >0	10 (71%)	3 (50%)	5 (83.3%)
Remuzzi interstitial fibrosis score >0	7 (50%)	3 (50%)	4 (66.7%)
Remuzzi arteriosclerosis score >0	12 (86%)	3 (50%)	4 (66.7%)
Remuzzi score, median (interquartile range) -Remuzzi score ≥4	3 (2-4) 6 (43%)	3 (1-4) 3 (50%)	3 (2-4) 2 (33.3%)

1-Extended criteria donor by age ≥60 or UNOS criteria

2-Left ventricular hypertrophy by electrocardiogram or echocardiogram

3-Living donor KDPI online calculator by Massie et al, American Journal of Transplantation 2016

(<https://www.transplantmodels.com/lkdpi/>)

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0730

Abstract Submission No. : APCN20251158

A four combined Everolimus base regimen offer beneficial long term kidney transplant graft survival

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Abstract

Introduction: Kidney transplantation is the treatment of choice for end stage renal failure patients. However, this treatment modality faces several challenges. One of them is the long-term survival of kidney graft. Most of the kidney graft can only last 7-10 years before them fail and render patients re-enter into dialysis. There is an urgent need to develop an effective immunosuppressive regimen to achieve long-term graft survival in these patients. Immunosuppressive regimen had been developed for several decades. Most of the regimen used now are based on calcineurin inhibitors. Calcineurin inhibitors effectively suppress T cell-mediated immune responses but are less effective against B cell activation. On the other hand, Everolimus has effects on both B and T cells. We therefore developed an everolimus based regimen to cover both B and T cells posttransplant activation.

Method: Eighty-eight renal transplant patients were enrolled in this study from 2015 to 2019. These patients were randomly assigned into either Calcineurin inhibitor base regimen or everolimus base regimen groups. Calcineurin inhibitor base group comprised of thirty patients, while everolimus groups had fifty-eight patients. After transplantation, both groups had calcineurin inhibitors base regimen as their immunosuppressive treatment in the first 12 weeks. Everolimus was introduced into the everolimus group 3 months post transplantation. We used overnight switch to add it to the regimen and reduce calcineurin inhibitors and mycophenolic acid dosage by 50% overnight. Both calcineurin inhibitors and mycophenolic acid were kept tapering as clinical conditions allowed until tacrolimus reached 0.5mg/day or cyclosporin reached 25mg/day. Mycophenolic acid were kept around one to two tablet a day whenever possible, while prednisolone was kept below 10mg per day. Graft function and proteinuria were monitored regularly during the whole study period.

Results: These patients were followed up for 204 weeks. Both groups had similar gender and cadaveric/living distribution. But the everolimus group had higher hepatitis and diabetes patients. At the end of the study, patients in the everolimus group had better graft function when compared with the patients in the calcineurin group (67 ± 22 vs 56 ± 33 ml/min $P < 0.001$) The calcineurin group also had higher spot urine proteinuria at the end of 204 weeks (1290 vs 412 mg/dl)

Conclusions: In our study, Everolimus base regimen offer better long term graft function with less proteinuria. Our results suggest that everolimus base regimen with timely conversion is fit for kidney transplant recipients and deserve larger scale study in the future.

Keywords : Everolimus, Transplantation, long term survival

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0731

Abstract Submission No. : APCN20251161

Evaluation of Adverse Drug Reactions associated with Tacrolimus and Concomitant Use of Fluconazole or Verapamil in Kidney Transplant Recipients

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Abstract

INTRODUCTION: Co-administration of cytochrome P450 (CYP) 3A4 inhibitors can significantly reduce the metabolic clearance of tacrolimus, resulting in elevated blood concentrations. Consequently, lower dosing of tacrolimus may be sufficient to maintain therapeutic levels. However, the potential for increased adverse drug reactions (ADR) related to elevated tacrolimus exposure in these patients remains a significant clinical concern.

OBJECTIVES: This study aimed to evaluate the incidence of ADR during the first year post-transplantation among kidney transplant recipients receiving a tacrolimus-based immunosuppressive regimen.

METHODS: All kidney transplant recipients aged 20 years or more who underwent kidney transplantation at a tertiary hospital in 2023, and receiving a tacrolimus-based immunosuppressant were included. Patients were excluded if they met at least one of the following: concomitant use of other strong CYP3A4 inhibitors, had been diagnosed with chronic liver diseases, or discontinued regular outpatient follow-up or had died. Drug usage, laboratory results, blood tacrolimus trough levels, and adverse events over a one-year follow-up period post-transplantation were retrospectively collected from medical records.

RESULTS: A total of 48 patients met the study criteria. Among them, 3 patients (6.3%) did not receive any concomitant use of fluconazole or verapamil; 7 patients (14.6%) received verapamil at a dose of 240-480 mg/day, 12 patients (25.0%) received fluconazole at a dose of 100-200 mg/day; and 26 patients (54.1%) received both fluconazole and verapamil. Urinary tract infection was the most frequently observed ADR, occurring in 10 patients (20.8%), followed by diarrhea in 9 patients (18.8%) and transaminitis or elevated liver enzymes in 7 patients (14.6%). Hypotension or bradycardia was not observed in any patient. The overall incidence of ADRs in this cohort was relatively low; therefore, statistical comparisons of ADR rates between groups were not performed. The average tacrolimus dose (mean standard deviation) progressively decreased from 5.3 1.8 mg/day at hospital discharge to 3.7 1.4, 3.0 1.4, 2.7 1.2, and 2.2 1.1 mg/day at months 3, 6, 9, and 12 post-transplant, respectively. The average tacrolimus trough concentration were 8.8 2.5, 7.8 2.9, 6.7 2.1, and 5.9 1.9 ng/mL at months 3, 6, 9, and 12 post-transplant, respectively.

CONCLUSION: Concomitant use of verapamil or fluconazole with tacrolimus did not result in an increased incidence of ADRs during the first year post-transplant in kidney transplant recipients.

Keywords : adverse drug reaction, tacrolimus, fluconazole, verapamil, kidney transplantation

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0732

Abstract Submission No. : APCN20251162

Teriparatide Treatment For Severe Refractory Hypocalcemia Among Parathyroidectomized Kidney Transplant Recipients: A Retrospective Case Series From A Single Centre.

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Abstract

Introduction

Hypocalcemia is a potentially lethal complication following kidney transplantation. Teriparatide is a synthetic form of parathyroid hormone (PTH) which can be used to treat severe hypocalcemia especially parathyroidectomized kidney transplant recipient.

Methods

This is a case series of three deceased-donor kidney transplant recipients who underwent parathyroidectomy before kidney transplantation from 2023 to 2025 at Hospital Selayang. They had developed severe hypocalcemia early after kidney transplantation. We analyzed the efficacy and safety profile of Teriparatide treatment among deceased-donor kidney transplant recipients with severe and prolonged hypocalcemia.

Results

All were females, mean age 43.3±10.7 years. Mean hemodialysis vintage 10 + 1 years. Mean cold ischemic time 9.3 + 1.5 hours. All received anti thymoglobulin as induction and maintenance immunosuppression were Mycophenolate mofetil, Tacrolimus and Prednisolone. All 3 subjects had immediate kidney graft function. Baseline serum corrected calcium 2.23 +0.25 mmol/L, serum phosphate 1.81+ 0.15 mmol/L, alkaline phosphatase 92.6 + 6.4 U/L and serum PTH 1.64 pmol/L. At post operative 6 + 2 days, subjects experience mean reduction of corrected serum calcium to 1.5 + 0.1 mmol/L. Two subjects were symptomatic. Treatment began with subcutaneous Teriparatide 20 mcg twice daily with gradual dose tapering base on the changes in serum corrected calcium which normalized to 2.35 + 0.05 mmol/L at 7 +1 days after initiation. Teriparatide was maintained for average of 22 +1 days. Two subjects stopped Teriparatide due to hypercalcemia. Serum calcium levels remained stable subsequently with low dose of maintenance oral calcium and calcitriol. In addition, serum creatinine remained stable for all subjects , no drug interactions with Mycophenolate mofetil and Tacrolimus were reported. Therapeutic drug level for Tacrolimus remain stable throughout Teriparatide treatment. Subjects able to discharge at 7.6 + 0.5 days after Teriparatide initiated for hypocalcemia.

Conclusion

This case series demonstrated that Teriparatide is effective for severe refractory hypocalcemia among kidney transplant recipients with low PTH. It leads to early normalization of serum corrected calcium and permits earlier suspension of intravenous calcium supplementation including reduction of calcitriol requirements. Despite its high cost, Teriparatide is one of a valuable option for reducing admission day if hospitalization is prolonged due to persistent hypocalcemia post kidney transplant. However, judicious monitoring of serum calcium level is essential to prevent side effects of hypercalcemia. Besides, short duration use of Teriparatide for recalcitrant hypocalcemia among parathyroidectomized post kidney transplant recipients has no effect on kidney graft function.

Keywords : Teriparatide, Parathyroidectomy, Kidney transplant, Refractory, Hypocalcemia.

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0733

Abstract Submission No. : APCN20251169

Once-Daily Tacrolimus Reduces Intra-Individual Variability in Blood Glucose and Tacrolimus Exposure Among Diabetic Kidney-Transplant Recipients

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Abstract

Background: Extended-release tacrolimus (once-daily formulation) is associated with lower inpatient variability in tacrolimus trough levels and may improve adherence. Whether this pharmacokinetic benefit translates into more stable glycemic control in diabetic kidney-transplant recipients remains uncertain. We assessed the impact of converting from twice-daily immediate-release tacrolimus to once-daily extended-release tacrolimus on both tacrolimus and glycemic variability.

Methods: Among 123 diabetic transplant patients, 39 who were switched to once-daily tacrolimus were identified retrospectively. Patients with < 9 months of follow-up after transplantation or any rejection episode were excluded, leaving 15 participants (9 men; mean age 55.3 ± 7.38 years) for analysis. For each patient, we calculated the coefficient of variation (CV, %) of fasting blood glucose, HbA1c, and tacrolimus trough concentration during two time windows: 6–12 months before and 12 months after conversion. Mean values for each parameter were also compared.

Results

- Tacrolimus exposure: The CV (%) for tacrolimus trough levels fell significantly after conversion (27.3 ± 11.7 vs 19.4 ± 8.2 ; $P = 0.028$).
- Glycemic metrics: The CV (%) for HbA1c decreased markedly post-conversion (6.79 ± 2.95 vs 4.24 ± 1.81 ; $P = 0.016$), whereas the CV for fasting blood glucose showed no significant change.
- Mean values: Mean fasting blood glucose, HbA1c, and tacrolimus trough concentrations were unchanged after conversion (all $P > 0.05$).
- Other variables: Serum creatinine, blood urea nitrogen, hemoglobin, and white-blood-cell counts showed no significant changes after the conversion.

Conclusion: Switching from a twice-daily to a once-daily tacrolimus formulation in diabetic kidney-transplant recipients significantly reduces inpatient variability in both tacrolimus exposure and HbA1c without altering mean drug levels or fasting glucose. Lower pharmacokinetic and glycemic variability may translate into improved long-term metabolic stability and graft outcomes. Prospective studies are warranted to confirm these findings and explore their clinical implications.

Keywords : diabetes, transplantation, tacrolimus, variability

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0734

Abstract Submission No. : APCN20251177

Exposure to Organophosphate Flame Retardants in Renal Transplant Recipients and Its Potential Nephrotoxicity

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Abstract

Organophosphate flame retardants (OPFRs) are recognized as emerging and ubiquitous environmental contaminants with possible nephrotoxicity. However, their exposure status and renal impacts have not been evaluated in renal transplant recipients. This cross-sectional study aimed to explore the associations between OPFR exposure and early renal injury in renal transplant recipients. We enrolled 150 renal transplant recipients and measured their urinary concentrations of the five highlighted OPFR metabolites (i.e., bis(2-chloroethyl) phosphate (BCEP), bis(1,3-dichloro-2-propyl) phosphate (BDCPP), bis(2-butoxyethyl) phosphate (BBOEP), di-n-butyl phosphate (DnBP), and diphenyl phosphate (DPHP)) and renal tubular injury biomarker, kidney injury molecule-1 (KIM-1). In our analysis, the overall urinary detection frequency of OPFR metabolite reached 100%, with a wide range of exposure levels among the study participants. The median (interquartile range) concentrations of BDCPP, BCEP, BBOEP, DnBP, and DPHP were 6.25 (1.89–11.90), 1.20 (0.47–3.08), 0.03 (0.02–0.08), 0.03 (0.02–0.16), and 1.20 (0.18–3.93) $\mu\text{g/g}$ creatinine, respectively. In the multiple linear regression model adjusting for age, sex, body mass index, chronic kidney disease staging, proteinuria, and other baseline covariates, we identified a significant positive association between the urinary concentrations of DPHP and KIM-1 (β (95% confidence interval), 0.086 (0.021–0.152) log ng/g creatinine per log $\mu\text{g/g}$ creatinine, $p = 0.010$). In conclusion, our findings indicate that exposure to OPFR is common and might lead to early renal injury in renal transplant recipients, underscoring the importance of further investigations on environmental nephrotoxic pollutants in vulnerable populations.

Keywords : Organophosphate flame retardants, renal transplant recipients, KIM-1

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0735

Abstract Submission No. : APCN20251201

Impact of Vitamin D Deficiency on Long-Term Outcomes in Kidney Transplant Recipients: A Real-World Analysis from the TriNetX Global Network

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Abstract

Background:

Vitamin D deficiency is common among kidney transplant (KTx) recipients and may adversely affect immune regulation and graft outcomes. However, large-scale evidence from real-world settings remains limited.

Methods:

We identified adult patients (≥ 18 years) who underwent kidney transplantation between January 2013 and December 2023 from the TriNetX Global Collaborative Network. Patients were divided into vitamin D deficiency (< 20 ng/mL) and non-deficiency (≥ 20 ng/mL) groups. Those with prior major adverse cardiovascular events (MACE), hospitalization, infection, graft rejection or failure, or follow-up less than 6 months were excluded. After 1:1 propensity score matching, 2,582 patients were included in each group and followed for up to 5 years.

Results:

During the 5-year follow-up, patients with vitamin D deficiency exhibited significantly higher rates of key clinical events. The incidence of graft rejection or failure reached 22.8% in the deficiency group versus 13.9% in the non-deficiency group, corresponding to a hazard ratio (HR) of 1.83 (95% CI: 1.55–2.16). Similarly, the vitamin D-deficient group showed elevated risks of sepsis (HR 1.65), urinary tract infection (HR 1.47), and pneumonia (HR 1.39). Hospitalization, cardiovascular events, and all-cause mortality were also more frequent among deficient patients, with HRs ranging from 1.18 to 1.25. Subgroup analyses confirmed that these associations remained robust in younger recipients (< 60 years), indicating that the negative impact of vitamin D deficiency is consistent across age groups.

Conclusion:

Vitamin D deficiency is independently associated with increased risks of graft failure, infection, hospitalization, and mortality following kidney transplantation. Post-transplant management strategies should incorporate routine monitoring and correction of vitamin D status to optimize long-term patient outcomes.

Keywords : Vitamin D deficiency, Kidney transplantation, Graft failure, Infection risk

Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0736

Abstract Submission No. : APCN20251210

Clinical Burden and Outcomes of RSV Infection in Kidney Transplant Recipients: A Multi-Center Real-World Analysis from TriNetX

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Abstract

Background:

Respiratory syncytial virus (RSV) is an emerging concern in immunocompromised populations, including kidney transplant (KTx) recipients. Real-world evidence on long-term incidence and outcomes remains scarce.

Methods:

We analyzed data from 156,878 adult KTx patients identified in the TriNetX global federated research network (2013–2023). We assessed RSV incidence and all-cause mortality up to 5 years after infection. Subgroup analyses were conducted by age and race.

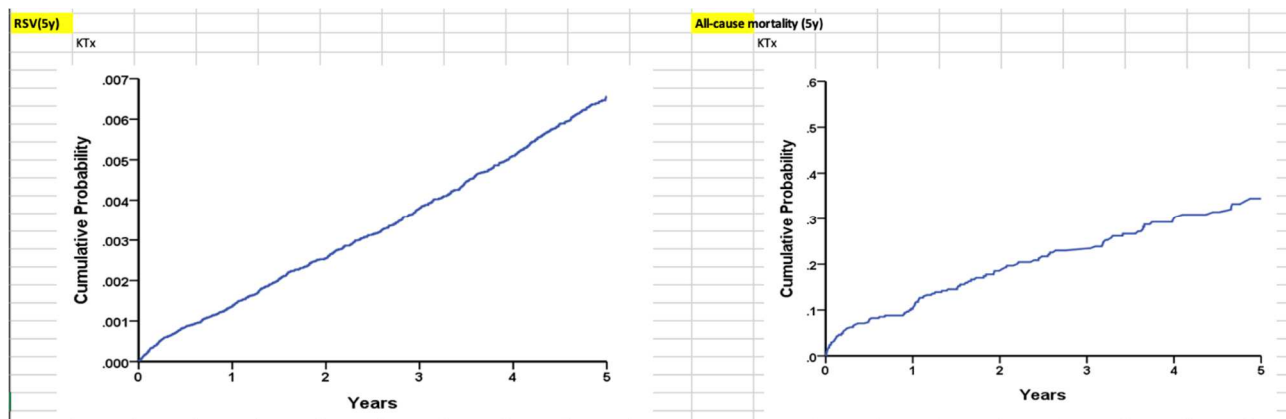
Results:

The 5-year cumulative incidence of RSV infection in KTx recipients was 0.66%. Among the 383 patients with confirmed RSV infection, all-cause mortality reached 10.3% at 1 year, 23.0% at 3 years, and 34.4% at 5 years. Age-stratified analysis revealed significantly higher 5-year mortality in recipients aged ≥ 60 years (50.9%) compared to those < 60 years (17.5%). Racial disparities were also observed: 5-year mortality was 37.7% in White patients, 31.0% in Black patients, and 11.1% in Asian patients. Despite a relatively low incidence, RSV infection was associated with substantial long-term mortality, particularly in older and White recipients.

Conclusion:

Kidney transplant recipients with RSV infection face a significant long-term mortality risk. These findings highlight the need for proactive RSV surveillance, vaccination strategies, and age- and race-sensitive risk stratification in post-transplant care.

Keywords : Respiratory Syncytial Virus (RSV), Incidence, Kidney transplantation, All-Cause Mortality



Poster Presentation : Kidney Transplantation and Regeneration

Poster No. : C0737

Abstract Submission No. : APCN20251216

Risk of Herpes Zoster Following Kidney Transplantation: A Real-World Multicenter Cohort Analysis

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Abstract

Background:

Herpes zoster (HZ) poses a significant infectious risk in immunocompromised individuals. While kidney transplant (KTx) recipients are known to have increased susceptibility, real-world population-level data remain limited.

Methods:

We conducted a retrospective cohort study using the TriNetX global research network, comprising 173 million patients from 151 healthcare organizations. Adults (≥ 18 years) who underwent KTx between 2013/01/01 and 2023/12/31 were identified. Patients with prior HZ or acute kidney injury (AKI) were excluded, yielding a final cohort of 155,025 KTx recipients. Incidence of post-transplant HZ and associated complications were evaluated, with propensity-score matched analyses performed to assess outcomes compared to dialysis populations.

Results:

Among 155,025 KTx patients, 3,759 developed HZ during follow-up. The cumulative incidence of HZ was 0.82% at 1 year, 2.23% at 3 years, and 3.53% at 5 years. Patients who developed HZ were older (mean age 57.8 vs. 52.7 years) and had higher prevalence of diabetes, hypertension, and cardiovascular comorbidities. All-cause mortality among KTx+HZ patients reached 4.69% at 1 year, 11.31% at 5 years, and 18.35% at 5 years. Importantly, among patients who developed HZ within the first-year post-transplant, recurrence rates were high: 28.94% at 3 years and 37.14% at 5 years.

Conclusions:

Herpes zoster remains a clinically significant infection in KTx recipients, associated with increased risk of mortality. Given the substantial long-term recurrence rates, these findings underscore the importance of vigilant post-transplant infection surveillance and consideration of both early and sustained preventive strategies, including pre-emptive and booster vaccination, in transplant protocols.

Keywords : Herpes Zoster, Kidney Transplantation, Mortality, Incidence, Recurrence

