Urinary Tract Infection in Egyptian Renal Transplant Recipients

Thesis
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List of abbreviations

99 mTc-DMSA SPECT	Technetium 99_m 2,3 dimercapto-succinic acid single-photon emission computer tomography
AAI	Acute allograft injury
ADPKD	Autosomal Dominant Polycystic Kidney Disease
APN	Acute pyelonephritis
ATG	Antithymocyte globulins
AZA	Azathioprine
BK	Balkan virus
C.difficile	Clostridium difficile
CD	Clusters of differentiation
CFU	Colony forming unit
Ch	Chronic
CMV	Cytomegalovirus
CS	Corticosteroid
CsA	Cyclosporine
CT	Computed tomography
DAF	Decay accelerating factor
DD	Deceased donor
DGF	Delayed graft function
dl	Deciliter
DM	Diabetes mellitus
DMSA	Dimercaptosuccinic acid
E.Coli	Escherichia coli

List of abbreviations

EBV	Epstein barr virus
ESRD	End stage renal disease
Ever	Everolimus
GFR	Glomerular filtration rate
GN	Glomerlonephritis
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HD	Haemodialysis
HIV	Human immune deficiency virus
HPF	High power field
HSV	Herpes simplex virus
HTLV	Human T cell lymphotropic virus
HTN	Hypertension
IgA	Immunoglobulin A
IL	Interleukin
Interst nephr	Interstitial nephritis
LD	Living donor
LPS	Lipopolysaccharide
MCUG	Micturating cystourethrogram
MDRD	Modification of Diet in Renal Disease
Mg/l	Milligram/liter
ML	Milliliter
MMF	Mycophenolate mofetil

List of abbreviations

mRNA	Messenger ribonucleic acid
MRSA	Methicilline resistant staphylococcus aureus
Ms	Months
Obst urop	Obstructive uropathy
OKT 3	Brand name for muromonab-CD3
Pap	Pyelonephritis-associated pili
PCP	Pneumocystitis carini pneumonia
PET	Positron emission tomography
PKD	Polycystic kidney disease
PTLD	Post transplantation lymphoproliferative disorder
Pyeloneph	Pyelonephritis
RSV	Respiratory syncitial virus
S stercoralis	Strongyloides stercoralis
S.saprophyticus	Staphyloccus saprophyticus
SARS	Severe acute respiratory syndrome
Sig	Significance
sIL-RA	Soluble interleukin receptor antagonist
SRL	Sirolimus
Staph	Staphylococcus
Std.deviation	Standard deviation
Strept	Streptococcus
T cruzi	Trypenosoma cruzi

List of abbreviations

T gondii	Toxoplasma gondii
TAC	Tacrolimus
TB	Tuberculosis
TMP-SMZ	Trimethoprim-sulphamethaxazole
TNF	Tumour necrosis factor
Tx	Transplant
USRDS	United States Renal Data System
UTI	Urinary tract infection
VRE	Vancomycin resistant enterococci
VUR	Vesico ureteric reflux
VZV	Varicella zoster virus
WBC	White blood cells
Ys	Years

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INTRODUCTION

Kidney transplantation is the best available replacement therapy for patients with end-stage renal disease (ESRD) ***(Veroux M et al., 2008).***

Successful renal transplantation allows freedom from the lifestyle restrictions and complications associated with dialysis and are therefore associated with better quality of life. One study of United States Renal Data System (USRDS) data compared outcomes in patients on the transplant waiting list (ie, who were continuing to receive dialysis) with those of controls who had received a kidney transplant. It found that, after 3 to 4 years of follow-up, transplantation reduced the risk of death overall by 68%. Transplantation conferred a survival benefit in almost all subgroups, including in elderly or obese patients or those with hepatitis C. In addition, over the long term, it is more cost-efficient than dialysis. Thus, transplantation remains the optimal therapy for patients with end-stage renal disease (ESRD) ***(Magee CC&Pascual M, 2004).***

Despite improved outcomes in kidney transplant patients over the years, infectious complications remain a significant cause of morbidity and mortality in this population ***(Witzke O et al, 2001).***

Infectious complications are the second most common cause of death after transplantation, Urinary tract infection (UTI) is the most common infectious complication following renal transplantation ***(Senger SS et al, 2007).***

The first month post–kidney transplantation is considered the critical time, with most UTI episodes during this period., Beyond three months after transplantation, the incidence of UTI decreases progressively ***(Khosroshahi HT et al, 2006).***

The major risk factors for UTI in the renal transplant recipient include pre-transplantation UTI, prolonged period of HD, polycystic kidney disease, DM, shistomiasis, immuno-suppression, allograft trauma, and technical complications associated with ureteral anastomosis, prolonged postoperative bladder catheterization , Female recipients had significantly more UTI than males ***(De Souza RM& Olsburgh J, 2008).***

Urinary tract infection (UTI) is commonly due to bacterial infection in the post-transplantation period. Fungi and viruses can also cause UTIs, but infections caused by these organisms are less commonely ***(De Souza RM& Olsburgh J, 2008).***

It was found that gram-negative organisms were seen most frequently (73%) in renal transplant recipients hospitalized with urinary tract infections, were Gram-negative bacilli with