Foley Catheter Associated Urinary Tract Infection in Kidney and Pancreas Transplant Patients

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BACKGROUND

In the kidney and pancreas transplant unit, a Foley catheter is of the utmost importance, and the percentage of patients who experience urinary tract infections has a substantial impact on the overall health of the patient.

A urinary tract infection (UTI) affects any organ or structure inside the urinary tract, including the kidneys, ureters, bladder, and urethra. A CAUTI arises when microorganisms, mostly bacteria, infiltrate the urinary system via a urinary catheter, resulting in infection.

PURPOSE

Patients in the pancreas and kidney transplant unit require special treatment due to their high risk of infection due to their compromised immune systems. We must use extreme caution when doing foley care and placement to ensure the appropriate intervention.

METHODS

Utilize urinary catheters alone when necessary. Insert catheters with appropriate aseptic methods with sterile instruments. Preserve the catheter's sealed sterile drainage system. Withdraw catheters promptly when patients no longer require them. Extended usage is the primary risk factor for catheter-associated urinary tract infections (CAUTIs).

Short vs. Prolonged antibiotic treatment for complicated urinary tract infection after kidney transplantation

a retrospective study examining applicability of short antibiotic courses for UTI in kidney transplant recipients

Dichotomized groups	
Short	Prolonged
(6-10 days)	12-21 days

2011-2019

Σ 214 recipients hospitalized with UTI

inverse probability treatment weighted (IPTW) adjustment

Avni Nachman et al. 2021

Outcome

	Short treatment n. 115	prolonged treatment n. 99	All cohort n.214	P value
Composite outcome	33 (28.7%)	30 (30.3%)	63 (29.4%)	0.797
Relapse of UTI	19 (16.5%)	21 (21.2%)	40 (18.7%)	0.38

No difference for length of stay, bacteremia rates, MDR development, serum creatinine 30 and 90 days post admission.

Multivariate analysis deceased donor was the only risk factor for all cause mortality / readmission

Conclusion

No difference found in clinical outcomes between recipients treated with short course antibiotic vs prolonged course

ESOT

Transplant Trial Watch

BASIC PRINCIPLES FOR URINARY CATHETER INSERTION AND MANAGEMENT IN ACUTE CARE

1. Check if an indwelling catheter is clinically indicated
2. Insert the catheter using aseptic technique
3. Document catheter insertion and indication
4. Maintain asepsis and closed system while the catheter is in place
5. Only collect urine specimens for culture if clinically indicated
6. Remove the catheter as soon as it is no longer needed
7. Review CAUTIs incidents

RESULTS

Recall new material about urinary catheters and catheter-associated urinary tract infections (CAUTIs).

Define CAUTI and identify its risk factors in kidney and pancreas transplant unit

Identify current evidence-based practices to prevent CAUTIs, like good hand washing and Proper technique when providing foley care.

Assess the effectiveness of CAUTI prevention strategy bundles.

Outline the latest research on new technologies and approaches to urinary catheterization and their potential impact on CAUTI rates.

Acquire tools to advocate for policies and practices that support CAUTI prevention and antimicrobial stewardship principles.

CONCLUSIONS

CAUTI is a significant issue for the millions of individuals who receive urinary catheters each year. Regrettably, the most efficacious preventive measure identified thus far is the implementation of a closed drainage system, which initially started approximately a century ago. The optimal course of action, when the catheter is no longer required, is to remove it as swiftly as possible; automated computer stop orders may advocate for this procedure. Furthermore, strict adherence to infection control protocols can reduce the incidence of CAUTI. It is critical to facilitate urine outflow through gravitational mechanisms. You can implement all the previously mentioned measures immediately, as they are relatively economical.

REFERENCES

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