

VANDERBILT  UNIVERSITY

MEDICAL CENTER

**Protocol:** Adult Burn UTI Protocol

Category	Clinical Practice
Approval Date	9-28-2020
Due for review	9-28-2022

Applicable to	
<input checked="" type="checkbox"/> VUH	<input type="checkbox"/> Children's <input type="checkbox"/> DOT <input type="checkbox"/> VMG Off-site locations <input type="checkbox"/> VMG <input type="checkbox"/> VPH <input type="checkbox"/> Other
Team Members Performing	
<input type="checkbox"/> All faculty & staff	<input checked="" type="checkbox"/> Faculty & staff providing direct patient care or contact
<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> MD <input checked="" type="checkbox"/> House Staff <input checked="" type="checkbox"/> APRN/PA <input checked="" type="checkbox"/> RN <input type="checkbox"/> LPN
Content Experts	
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- I. **Population:**  
Adult burn patients symptomatic of urinary tract infection.
  
- II. **Purpose:**  
Provide standardization of treatment for urinary tract infections in the burn population.
  
- III. **Assessment:**

<u>*Signs and Symptoms of UTI</u>	<u>**Characteristics of Complicated UTI</u>
<p>New onset urinary frequency  Dysuria  Suprapubic Pain  Fever &gt; 38.5°C  Altered mental status or lethargy unexplained by other causes/injury  Rigors  New pelvic pain  Hypotension unrelated to medications  Acute hematuria unrelated to injury</p> <p><b>If Spinal Cord Injury:</b> dysreflexia, discomfort, increased spasticity</p> <p><b><i>Foul smell and cloudiness in the absence of other symptoms are not indications for a UA!</i></b></p>	<p>(long-term or permanent indwelling device)</p> <p>Male gender if BPH or prostatitis  Neurogenic bladder  Polycystic kidneys  Suprapubic catheter  Indwelling urinary catheter  Ureteral obstruction or stent  Nephrostomy tube  Pregnancy  Kidney failure  Immunosuppression</p>

IV. Intervention:

**\*The following needs to be administered via Central Line\***

**Burn Service Empiric UTI Treatment**

*\*Not intended for patients with septic shock\**

At least 1 symptom\* of UTI must be present  
> 12 hours  
(Unless signs of sepsis)

Yes

No

Obtain Urinalysis

No urinalysis or urine culture indicated; pursue other workup

> 10 WBC or +Nitrites and +Leukocytes<sup>#</sup>

< 10 WBC and No Nitrites or Leukocytes

Complicated UTI\*\*

Uncomplicated UTI

Investigate other source

**\*Urine culture\***  
Empiric treatment with Rocephin 2gm IV Q24h or Levaquin 500mg IV daily

If culture grows > 100,000 cfu/mL, treat 7-10 days. If culture negative, discontinue abx.

Admitted > 72 hrs or foley placed (male or female)<sup>^</sup>

Levaquin PO 250mg daily x 5 days OR Cefuroxime PO 250mg BID x 7 days

Admitted < 72 hrs, no foley, and female

Bactrim DS PO BID x 3 days or Macrobid PO 100mg BID x 5 days

*Obtain urine culture only if no improvement within 48 hours.*

\* See page 2 for a list of symptoms for which to initiate this algorithm

<sup>#</sup> Urinalysis is invalid if >5 squamous epithelial cells/HPF and should be repeated. Additionally, the absence of pyuria suggests an alternate diagnosis other than UTI. While the diagnostic capability of the urinalysis is limited, literature suggests that nitrites may be useful in screening for a UTI.

<sup>^</sup> Applies to current or previous placement. Remove current Foley catheter, if possible.

\*\* See page 2 for a list of conditions associated with a complicated UTI.

V. Considerations:

- Macrobid should not be used if CrCl <60 mL/min.
- Adjust Bactrim to SS tablet if CrCl < 30mL/min. Not for dialysis patients.
- Reduce Levaquin dose to 250mg daily if CrCl <50mL/min.
- Consider the antibiotic rotation eliminated class when choosing antibiotics on 11S.

## VI. References

1. Hooton, T.M., Bradley, S.F., Cardenas, D.D., et al. (2010). Diagnosis, prevention, and treatment of catheter-associated urinary tract infection in adults: 2009 international clinical practice guidelines from the Infectious Diseases Society of America. *Clinical Infectious Diseases*. 50: 625-663.
2. Gupta, K., Hooton, T.M. Naber, K.G., et al. (2011). International clinical practice guidelines for the treatment of acute uncomplicated cystitis and pyelonephritis in women: A 2010 update. *Clinical Infectious Diseases*, 52(5): e103-e120.
3. Matthews, S.J., Lancaster, J.W. (2011). Urinary tract infections in the elderly population. *American Journal of Geriatric Pharmacotherapy*, 9: 286-309.
4. Giesen, L.G., Cousins, G., Dimitrov, B.D., Laar, F., Fahey, T. (2010). Predicting acute uncomplicated urinary tract infection in women: A systematic review of the diagnostic accuracy of symptoms and signs. *BMC Family Practice*, 11: 78.
5. Frazee, B.W., Enriquez, K., Ng, V., Alter, H. (2015). Abnormal urinalysis results are common, regardless of specimen collection technique in women without urinary tract infections. *The Journal of Emergency Medicine*, 48(6): 706-211.