

MEDICAL CENTER

Protocol: Adult Burn UTI Protocol

Category	Clinical Practice
Protocol Number	BC-A-10
Approval Date	November 1, 2015
Due for review	November 1, 2017

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:**

<p><u>*Signs and Symptoms of UTI</u></p> <p>New Onset Urinary Frequency Dysuria Suprapubic Pain Fever > 38.5C Altered mental status or lethargy unexplained by other causes/injury Rigors New pelvic pain Hypotension unrelated to medications Acute hematuria unrelated to injury If Spinal Cord Injury: Dysreflexia, Discomfort, Increased spasticity</p> <p><i>Foul smell and cloudiness in the absence of other symptoms are not indications for a UA!</i></p>	<p><u>** Characteristics of Complicated UTI</u></p> <p>(long-term or permanent indwelling device)</p> <table style="width: 100%; border: none;"> <tr> <td>Male gender if BPH or prostatitis</td> <td>Ureteral obstruction</td> </tr> <tr> <td>Neurogenic bladder</td> <td>Kidney failure</td> </tr> <tr> <td>Polycystic kidneys</td> <td>Immunosuppression</td> </tr> <tr> <td>Immunocompromised state</td> <td>Suprapubic catheter</td> </tr> <tr> <td>Indwelling urinary catheter</td> <td>Ureteral stent</td> </tr> <tr> <td>Nephrostomy tube</td> <td>Pregnancy</td> </tr> </table>	Male gender if BPH or prostatitis	Ureteral obstruction	Neurogenic bladder	Kidney failure	Polycystic kidneys	Immunosuppression	Immunocompromised state	Suprapubic catheter	Indwelling urinary catheter	Ureteral stent	Nephrostomy tube	Pregnancy
Male gender if BPH or prostatitis	Ureteral obstruction												
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Nephrostomy tube	Pregnancy												

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[#]

< 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)[^]

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

[#] 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.

[^] 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

References:

1. Hooton TM, Bradley SF, Cardenas DD, et al. 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*. 2010;50:625-663.
2. Gupta K, Hooton TM, Naber KG, et al. International Clinical Practice Guidelines for the Treatment of Acute Uncomplicated Cystitis and Pyelonephritis in Women: A 2010 Update. *Clinical Infectious Diseases*. 2011;52(5):e103-e120.
3. Matthews SJ, Lancaster JW. Urinary Tract Infections in the Elderly Population. *Am J Geriatr Pharmacother*. 2011;9:286-309.
4. Giesen LG, Cousins G, Dimitrov BD, Laar F, Fahey T. Predicting acute uncomplicated urinary tract infection in women: a systematic review of the diagnostic accuracy of symptoms and signs. *BMC Family Practice*. 2010;11:78.
5. Frazee BW, Enriquez K, Ng V, Alter H. Abnormal Urinalysis Results Are Common, Regardless of Specimen Collection Technique in women without urinary tract infections. *The Journal of Emergency Medicine*. 2015;48(6): 706-711.

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Adapted from Trauma's UTI Protocol by Susan Hamblin, PharmD, BCPS; Bethany Evans, ACNP-BC