BROWN EMERGENCY MEDICINE CDU
CELLULITIS TREATMENT PATHWAY

Purpose: To efficiently and safely manage patients with cellulitis who require additional care beyond initial Emergency Department management.

Inclusion Criteria

- Clinical diagnosis of Cellulitis

CDU Exclusion Criteria[1]:

- HR >110, persistent
- SBP < 90mmHg
- O2 sat <95%
- Respiratory rate >30
- Severe Sepsis or Septic Shock
- Lactate >2 (if obtained)[2]
- Prior culture data with MDRO sensitive only to IV antibiotics
- Immunocompromised status – active chemotherapy plan, HIV, sickle cell disease, cirrhosis, asplenia, autoimmune disease or chronic illness requiring immunosuppressive medications
- Fournier's Gangrene or Necrotizing Fasciitis
- Cellulitis associated with Diabetic Foot infection
- Altered mental status
- Neurologic dysfunction (MS, paraplegia)
- Concurrent medical problem requiring admission
- Any condition found on the "CDU Universal Exclusion Criteria" list
- Requiring more assistance for ADLs than the CDU is capable of safely providing (one assist/patient for units with 5:1 maximum staff:patient ratio and no assists for units with >5:1 maximum staff:patient ratio)
- Unlikely discharge within 48 hrs. (ED attending discretion)

Last Update: 12/18/22, EEG

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[1] Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by the Infectious Diseases Society of America

[2] Volz et al. Identifying patients with cellulitis who are likely to require inpatient admission after a stay in an ED observation unit. Am J Emerg Med, Feb 2013.

CELLULITIS CDU MANAGEMENT PATHWAY[3]

Pre-observation unit evaluation should include:

1. CBC
2. Chem 7
3. UHCG (if indicated)
4. Lactate (if indicated)

Blood cultures are not routinely recommended in the management of cellulitis[i]

CDU interventions may include:

1. Demarcation of cellulitis on arrival to CDU
2. Serial vital signs
3. If infection is on extremity - elevation
4. IV hydration, if indicated
5. Analgesics
6. Antipyretics
7. Antibiotics (assuming adequate renal function)
    a. If prior culture data available, tailor antibiotics toward likely pathogens
    b. If no prior culture data[ii] please see next page for recommended antibiotics

Indications for hospital admission while under CDU observation:

1. Newly and persistently abnormal vital signs
2. Clinical deterioration
3. Suspicion for deep tissue infection
4. Inability to be discharged within 24 hours

Discharge Planning:

1. Clinical improvement
2. Tolerate PO
3. Primary Care follow-up as per provider discretion

Outpatient Antibiotic Regimens (assuming normal renal function)

- Recommended 5 day course that can be extended if needed for complete resolution
    - Base on suspected entity and response to treatment under observation
    - Most Anti-MRSA antibiotics have poor anti-Strep activity. In cases where Staph or Strep cannot be differentiated, consider double coverage such as Bactrim and Cephalexin.

[3] Reviewed January 2016 with Infectious Diseases and February 2016 by Pharmacy and Therapeutics Committee

Suspected Entity	Comment	IV Antibiotic (assuming normal renal function)	PO Antibiotic (assuming normal renal function)	Relative Cost of IV / PO
Non-purulent cellulitis or lymphangitis (Streptococcal Cellulitis)		Cefazolin 2 g IV every 8 hr	Cephalexin 500 mg PO every 6 hrs	$ / $
		Penicillin 2-4 million units IV every 4-6hr	Amoxicillin 500 mg PO every 8 hr	$$ / $
	PCN allergic	Clindamycin 600mg IV every 8 hr	Clindamycin 450 mg PO every 6 hr	$$ / $$
	PCN allergic		Levofloxacin 750 mg PO every 24 hr	$$ / $
Purulent Cellulitis* (MSSA)		Cefazolin 2 g IV every 8 hr	Cephalexin 500 mg PO every 6 hr	$ / $
	May also use anti-MRSA antibiotics		Dicloxacillin 500 mg PO every 6 hr	$ / $$
			Amoxicillin 500 mg PO every 8 hr	$ / $
Purulent Cellulitis (MRSA)		Vancomycin - Initial loading dose of 25 mg/kg IV x 1, then 15 -20 mg/kg IV every 12 hrs	TMP / SMX (Bactrim) 2 DS tabs PO every 12 hr	$$ / $
			Doxycycline 100 mg PO every 12 hr	$$ / $
	Avoid with SSRIs	Linezolid – PO equal to IV	Linezolid 600 mg PO every 12 hrs	$$$$ / $$$
Bite wound Infection (Human or other mammal)		Ampicillin /sulbactam (Unasyn) 3 G IV every 6 hr or piperacillin / tazobactam (Zosyn) 3.375G IV every 6 hr	Amoxicillin /clavulanate (Augmentin) 875/125 mg PO every 12 hr or doxycycline as below	$$/$
	PCN allergic	Doxycycline – PO equal to IV	Doxycycline 100 mg PO every 12 hr	$$ / $
	PCN allergic	Levofloxacin – PO equal to IV	Levofloxacin 750 mg PO every 24 hr	$$ / $

*Purulent Cellulitis= cellulitis associated with purulent drainage or exudate in absence of drainable abscess

[i] Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by the Infectious Diseases Society of America

[ii] Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by the Infectious Diseases Society of America