Community Acquired MRSA: Evidence based protocol for the Emergency Department

Anita Dawn Barnes, DNP, RN, FNP-BC

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Problem

- ED visits for SSTIs jumped corresponding with CA-MRSA emergence\(^1\)
- $26,831.42 : most cost effective treatment course to cure complicated CA-MRSA SSTIs\(^2\)
- ED physicians not treating according to guidelines\(^3\)
Literature Review

- Protocol-driven treatment is effective \(^4\)
- 2010 study \(^5\)
  - 28% decrease in invasive MRSA infections diagnosed in the hosp.
  - 17% decrease in invasive MRSA infections diagnosed before hosp. admission (recent healthcare exposures)
- Little evidence of that risk of developing CA MRSA is on same downward trend \(^6\)
Project Setting

- Memorial Health Systems of East Texas Emergency Department – Extended Triage area (AKA Fast Track)
Project

- Provider pre education & post project surveys (7 NPs/PAs)
- Provider education
- Implementation of evidence based treatment protocol
- Patient contact in 7 days after treatment to determine improvement via telephone follow-up
Project Population

- 21-49 years old
- Nonpregnant
- No history of diabetes or immunocompromising diseases
Presenting problem: Redness, swelling, warmth or pain/tenderness of the skin or complaint of a ‘spider bite’.

- Does the lesion have any of these symptoms?
  - Fluctuance – palpable fluid-filled cavity, movable, compressible
  - Yellow or white center
  - Central point or ‘head’
  - Draining pus
  - Possible to aspirate pus with needle and syringe
If yes, then:

- Drain the lesion
- Send wound drainage for culture and susceptibility testing
- Advise the patient on wound care and hygiene
- Discuss follow-up plan with the patient
- Consider antimicrobial therapy in addition to incision and drainage
If no, then:

◦ Provide antimicrobial therapy
◦ Discuss follow-up plan with the patient
◦ Close follow-up is advised\(^7\)
Antibiotic Therapy

- **First-line** - Bactrim DS (trimethoprim/sulfamethoxazole) 160/800 1 tab po twice daily for 7 days.
- **Second-line** – clindamycin 150 mg po QID x 7 days.
- **Third-line** – doxycycline hyclate 100 mg po BID x 7 days
- **Fourth-line** – rifampin 150 mg po BID x 7 days IN ADDITION TO one of the above antibiotics.
The beginning ..... 

One week later, before incision & draining ..... 

Looking down forearm toward pinky. 

Pinky finger.
Provider Results

- Pre-Education Survey
  - 14% preferred treatments not CDC recommended
  - 100% were open to changing treatment plans if supported by current research

- Post Project Survey
  - 6 out of 7 reported knowledge level – excellent
  - 1 reported knowledge level as somewhat good
  - All reported protocol as effective and would continue to use
# Patient Results

<table>
<thead>
<tr>
<th>Measure</th>
<th>Number of Patients</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signed consents</td>
<td>52</td>
<td>--</td>
</tr>
<tr>
<td>Signed consents &amp; met inclusion criteria</td>
<td>48</td>
<td>--</td>
</tr>
<tr>
<td>Patient contacted for phone call follow-up</td>
<td>45</td>
<td>93.75</td>
</tr>
<tr>
<td>Followed up with primary care provider w/in 7 days of initial treatment</td>
<td>3</td>
<td>6.67</td>
</tr>
<tr>
<td>Reported improvement with change in treatment plan</td>
<td>1</td>
<td>2.22</td>
</tr>
<tr>
<td>Reported improvement w/out a change in initial treatment plan</td>
<td>44</td>
<td>97.78</td>
</tr>
<tr>
<td>Reported decrease in pain 7 days after initial treatment</td>
<td>45</td>
<td>100</td>
</tr>
</tbody>
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Infectious Diseases Society of America
  ◦ Clinical Practice Guidelines
Take Home Tips About Protocols

- Provides an opportunity to educate providers
- Keep care consistent
- Reflect evidence based practices
- They work to improve patient care!
References


