Use of a Skin and Soft Tissue Protocol to Reduce Emergency Department use of Ertapenem in a 325 Bed Community Hospital

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Background

- Skin and soft tissue infections (SSTI) are the 3rd most common presentation to the emergency department.
- The IDSA guidelines for SSTI recommend that the empiric treatment for simple SSTI be:
  - An anti-staphylococcal penicillin or a first or second generation cephalosporin.
  - Ertapenem may appear to be a good choice to treat SSTI due to its broad spectrum of activity against both gram positive and gram negative bacteria. However, the guidelines state that ertapenem should be saved for complicated infections or for infections caused by bacteria resistant to our first line options.

Purpose

- In 2011 a protocol for the treatment of SSTI in the to standardize the approach to treating SSTI in the emergency department.
- The primary outcome: determine the effect the protocol has had on the use of ertapenem to treat SSTI in the emergency department.
- A relative decrease of 25% would show efficacy of the implemented protocol.

Methods

- Retrospective, observational study.
- ICD9 codes were used to identify patients presenting to the ED with SSTI before and after the protocol was implemented.
- Reviewed electronic medical record to evaluate which agent was used to treat patients.
- Data evaluated using chi squared test.

Inclusion Criteria

- Treated in the ED for SSTI
- No documentation of SSTI
- No documentation of antibiotics given
- Dental abscess
- Paronychia

Exclusion Criteria

- No documentation of antibiotics given
- Dental abscess
- Paronychia

Results

- Primary Outcomes:
  - The difference in ertapenem use was found to be statistically significant (P<0.0001)
  - Correlates to ~$11,000 cost savings per year
- Secondary Outcomes:
  - While ertapenem may have covered the bacteria that grew on the initial culture, the majority of the time ertapenem was not an appropriate option for empiric treatment of the patient’s SSTI.

Conclusions

- Implementation of the protocol was associated with decrease the use of ertapenem to treat SSTI in our emergency department.

References

- Please see handout.

Disclosure

- The author of this presentation has the following to disclose concerning possible financial or personal relationships with commercial entities that may have direct or indirect interest in the subject matter of this presentation:
  - Dustin Waters: Nothing to disclose
  - Brittany Bryan: Nothing to disclose