Patient Presentation

Only provide the necessary information to present a clear clinical picture of the patient to frame your clinical question. Do NOT provide a full H/P. You would not give every piece of the H/P when rounding with a clinical faculty member. Provide only relevant points.

The patient that presented was a 62-year-old African American woman of normal weight.

Chief complaints
Progressively more painful swelling of right leg for 11 days

History of Present Illness:
Eleven days ago the patient developed pain in her right lower leg. Localized about 20 cm below the knee joint was pain. Progressive swelling developed over a three-day period from her first noticing the spot. The spot had non-radiating throbbing pain and itched. Since then the expanded areas has developed red and shiny patchy regions. She has not experienced trauma, insect bite recently and has not been walking bare foot. No history of rashes, ulcer, vesicles, pus or discharge from the swollen area. No change in the color of overlying skin. In the three days before presentation, the pain has become difficult and she no longer wants to put weight on her leg.

Patient did not complain of fever, rigor, sweating or rashes in other parts of the body. Upon presentation, she is running a mild fever 99°. Her lab results show a mildly elevated white count (10,500 per mm³)

The patient did not have a history of congestive heart failure or kidney disease. In addition, she has no numbness of tingling of the limbs or decreased sensation prior to this episode. No other system changes. She had no known exposure to anyone else with a recent MRSA diagnosis.

She has type 2 diabetes mellitus that was diagnosed three years ago but is controlled with oral medication (metformin), exercise (walking daily) and diet. She had two normal vaginal births but no other major surgeries. She has no other health issues.

She has suspected cellulitis but there was a debate on whether she should be admitted because she has diabetes or discharged outpatient with antibiotics.

Clinical Question
Do individuals with adequate access to medications, outpatient healthcare and type two diabetes mellitus need inpatient hospital treatment for progressive lower limb cellulitis?

Articles
Systematic Review (SR)/Meta-Analysis (MA) or Guideline Based on a SR or MA.

Abetz JW, Adams NG, Mitra B. Skin and soft tissue infection management failure in the emergency department observation unit: a systematic review. Emerg Med J.
Clinical Study (Observational, Diagnostic or Treatment)


Summary
In Abestz et al. the researchers had a clinically relevant and clear clinical question. They examined the literature on management failure in the emergency department for skin and soft tissue infections. The required databases were searched to find data. This study looked at a general population rather than those with type 2 diabetes mellitus. Although the study did not directly address the question of admission to the hospital, it did examine individuals placed in observation rather than directly admitted. The goal was to determine the number of admitted patients instead of discharged after the short observation period (defined as management failures). Of the six articles that were included in analysis, diabetes did not play a role in management failure. As diabetes mellitus was not a risk factor, no odds ratios or other numbers appear as outcomes. Other possible risk factors such as elevated fever, high white blood count, location of cellulitis, and previous exposure to MRSA did not match clinical scenario so they would not be reasons to elevate the need to admit the patient.

Cieri, et al. retrospectively reviewed charts of patients requiring additional prescriptions after their initial therapy or those admitted for inpatient treatment. The study data was pulled from charts in a Veterans Affairs hospital. While they found other issues for failure, they specifically point out in this article that diabetes mellitus did not increase the risk of requiring additional antibiotics or hospital admission. In patient scenario, the patient does not have obesity and/or heart failure which are the two main findings for failure in the study.

In applying the information gathered from these two articles to the patient scenario, it is important to note that diabetes is not a risk factor for management failure in either article. Cieri et al. specifically mention in their study that there was no increased risk for management failure in patients with diabetes mellitus. The patient had only a mild fever, mildly elevated white count, no known MRSA exposure, no heart failure diagnosis and was not obese. Given the lack of those symptoms in the clinical scenario patient, the decision to treat her cellulitis in the outpatient setting is reasonable especially since she has adequate access to outpatient care and can afford the antibiotics. Since diabetes often believe to be an increased risk factor for worse infection prognosis this data is enlightening.