The University of Houston College of Pharmacy provides its students, staff and faculty with the ability to print research posters for presentation at the meetings and symposia. The college’s research poster production center is housed in Health 2 3010 and is operated by the Office of Information Technology.

When printing posters is needed, please email rxposter@uh.edu or refer to the website for assistance in poster templates sizes and other questions you may have within the design of the poster.

Text and graphs in the template sample view is solely to allow faculty, staff and students some idea of the overall look.

1. **The following items are required for the UHCOP poster template:**
   - The colors used in this poster are according to the [UH Graphics manual](#).
   - Outside borders in the red and gray color
   - Top left UH logo and UHCOP mortar/pestle graphic
   - Top right could have our collaborative institutions logos
   - Header red fill color
   - If applicable, placement of printer company name/logo at bottom right or left must be smaller than any institutional logo

2. **The following items are optional for the UHCOP poster template:**
   - Watermark of mortar/pestle within the poster body
   - Collaborative institution acknowledgements located at the bottom of the poster as this may be determined by the presenter and collaborators
Determine the impact of early hyperglycemia on outcomes in diabetic and non-diabetic patients with P. aeruginosa bacteremia

Study design / Inclusion
-Retrospective of adult patients hospitalized at least 48 hours at St. Luke’s Episcopal Hospital in Houston, TX

- Patients included in the study had the following:
  - Positive PA blood culture from January 1, 2005 – December 31, 2009
  - At least one active antimicrobial on board started within 24 hours of culture

Data Collection
- Demographics, comorbidities, severity of illness (APACHE II score) on first day of positive culture, length of hospital stay
- Source of bacteremia, antimicrobial treatment (appropriate defined as at least one agent with in vitro activity started within 24 h [excluding amphotericin when used as only active agent])
- All blood glucose measurements done within 48 hours of positive culture

Statistical analysis
- Continuous variables compared using Student t test or Kruskal-Wallis test; categorical variables compared with Fisher’s exact test
- Continuous variables transformed into categorical variables at the most significant threshold breakpoint identified by classification and regression tree (CART) analysis
- Multivariable logistic regression model to identify risk factors for 30-day mortality in diabetic and non-diabetic patients separately
- Any variable with a p value < 0.2 by univariate analysis was included in the regression model for multivariable analysis
- Performed with SYSSTAT version 12.0 (Systat Software, Inc.; Point Richmond CA)

RESULTS

Table 1. Patient Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Diabetics</th>
<th>Non-Diabetics</th>
<th>OR (95% CI) p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>62.8 ± 15</td>
<td>56.3 ± 11.7</td>
<td>1.34 (1.17-1.53) 0.001</td>
</tr>
<tr>
<td>Males</td>
<td>47 (71.2)</td>
<td>118 (56.5)</td>
<td>1.10 (1.03-1.18) 0.005</td>
</tr>
<tr>
<td>Diabetes</td>
<td>66</td>
<td>110</td>
<td></td>
</tr>
</tbody>
</table>
| Baseline BG24 – Average glucose in the first 24 hours after positive culture; BG48 – Average glucose in the first 48 hours after positive culture

Table 2. Univariate analysis of risk factors for 30-day mortality in non-diabetic patients

<table>
<thead>
<tr>
<th>Variable</th>
<th>Diabetics</th>
<th>Non-Diabetics</th>
<th>OR (95% CI) p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>34 (51.5)</td>
<td>50 (24.2)</td>
<td>2.21 (1.37-3.62) 0.002</td>
</tr>
<tr>
<td>Renal</td>
<td>10 (15.1)</td>
<td>8 (3.8)</td>
<td>2.67 (1.10-6.45) 0.033</td>
</tr>
<tr>
<td>Immunosuppression</td>
<td>10 (15.1)</td>
<td>7 (3.4)</td>
<td>2.67 (1.10-6.45) 0.033</td>
</tr>
<tr>
<td>Source of bacteremia</td>
<td>Cardiac</td>
<td>19 (28.8)</td>
<td>1.00 (0.26-3.81) 1.000</td>
</tr>
<tr>
<td></td>
<td>Respiratory</td>
<td>11 (16.7)</td>
<td>1.00 (0.26-3.81) 1.000</td>
</tr>
<tr>
<td></td>
<td>Immunocompromised</td>
<td>9 (13.6)</td>
<td>1.00 (0.26-3.81) 1.000</td>
</tr>
</tbody>
</table>

CONCLUSIONS

- Baseline APACHE II score and average blood glucose of > 168 mg/dL in the first 24 hours after culture were predictors of 30-day mortality in patients with PA bacteremia.
- While probability of mortality was significantly higher in diabetic patients with elevated blood glucose, it was not an independent risk factor for mortality.
- Early glycemic control in non-diabetics may be a strategy for reducing mortality in PA infection, however prospective validation with a larger cohort of patients is warranted.