Dedifferentiated Endometrial Adenocarcinoma

Hasti Poya M.D.

Endometrial Adenocarcinoma

- Most common malignancy of female genital tract
- Majority of women diagnosed at an early stage
- Most common type is endometrioid (80%)
- Usually found in its pure form, however 20% will be admixed with other components

Endometrial Adenocarcinoma

5-Year Survival

Stage At Presentation
FIGO Grading System

Grade 1  Grade 2  Grade 3

Dedifferentiated Endometrial Adenocarcinoma

- Frequently diagnosed as FIGO Grade 3
- Represents estimated 9% of all endometrial cancers
- Defined as "complete absence of glandular differentiation"
- Can significantly alter prognosis

- Solid group of monotonous epithelial cells
- Complete absence of glands
- Enlarged nuclei
- Minimal staining of keratin, usually 5-10%
Hypothesis

• Dedifferentiated endometrial adenocarcinoma is associated with a worse prognosis than Grade 3 endometrial adenocarcinoma

Study Design

• Retrospective cohort of Grade 3 Endometrial Cancers from 2003-2013
• Pathology slide review

• Statistical Analysis: Wilcoxon signed rank test
• Null Hypothesis: no difference between Grade 3 endometrial adenocarcinoma and dedifferentiated endometrial adenocarcinoma
Results

Grade 3 Endometrial Adenocarcinoma (n=53)

- FIGO Grade 3 n = 28
- Reclassified as dedifferentiated tumor n = 11
- Excluded due missing data n = 14

Results

Patient Characteristics

<table>
<thead>
<tr>
<th></th>
<th>FIGO Grade 3</th>
<th>Dedifferentiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at diagnosis</td>
<td>65.4 ± 28.2</td>
<td>64.5 ± 19.6</td>
</tr>
<tr>
<td>BMI</td>
<td>30.4 ± 15.6</td>
<td>32.6 ± 12.2</td>
</tr>
<tr>
<td>HRT</td>
<td>n=1</td>
<td>n=0</td>
</tr>
</tbody>
</table>

Results

Patient Characteristics

<table>
<thead>
<tr>
<th>Comorbidities</th>
<th>FIGO Grade 3</th>
<th>Dedifferentiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM2</td>
<td>5 (18%)</td>
<td>7 (64%)</td>
</tr>
<tr>
<td>HTN</td>
<td>17 (61%)</td>
<td>6 (54%)</td>
</tr>
<tr>
<td>HL</td>
<td>15 (54%)</td>
<td>4 (36%)</td>
</tr>
<tr>
<td>History of other</td>
<td>4 (14%)</td>
<td>3 (27%)</td>
</tr>
<tr>
<td>malignancy*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Thyroid cancer (2), breast cancer (4), gallbladder cancer (1), skin cancer (2)
Results

<table>
<thead>
<tr>
<th>FIGO Grade 3</th>
<th>Dedifferentiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Stage</td>
<td>18 (75%)</td>
</tr>
<tr>
<td>Advanced</td>
<td>10 (25%)</td>
</tr>
</tbody>
</table>

Results

<table>
<thead>
<tr>
<th>FIGO Grade 3</th>
<th>Dedifferentiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Recurrence</td>
<td>18 (64%)</td>
</tr>
<tr>
<td>Recurrence</td>
<td>10 (36%)</td>
</tr>
</tbody>
</table>

Conclusions

- FIGO Grade 3 and dedifferentiated population similar in age and BMI
- Dedifferentiated cancers more likely to present as advanced stage
- More likely to have recurrence if dedifferentiated component present
Observations

- Even 5% dedifferentiated altered prognosis
- With positive lymph nodes, dedifferentiated component metastasized
- In 33% EMB did not correlate with surgical pathology (uniformly upgraded)
- Fixation of specimen can greatly affect interpretation!
- Dedifferentiated component not responsive to Megace

Future Directions

- Need for further data collection looking at a larger cohort
- Prognostic and treatment implications?

Acknowledgements

Dr. Allison Axtell
Dr. Sathima Natarajan
References