Characteristics of Fractures in H2RA Exposed Pediatric Patients
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**Background**
- H2RAs and PPIs are both widely used in the treatment of peptic disorders
- Multiple studies indicate PPIs are associated with the risk of fractures
- Our prior study indicated a higher risk of lower extremity, rib, and spine fractures among PPI exposed patients
- There is a lack of data on mechanism of this risk raising the question of whether it is due to the underlying diagnosis or the treatment of the underlying pathology
- Recent removal of ranitidine has raised wider consumer concerns for safety of H2RAs

**Study Aims**
- To compare the fracture risk among pediatric patients with documented H2RA exposure to those receiving neither an H2RA nor PPI
- To compare fracture characteristics among pediatric patients exposed to H2RA to those without H2RA or PPI exposure

**Results**

<table>
<thead>
<tr>
<th>H2RA Exposed Fracture Distribution</th>
<th>H2RA Unexposed Fracture Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rib/Spine/Hip 12.9%</td>
<td>Humerus 12.9%</td>
</tr>
<tr>
<td>Humerus 9.8%</td>
<td>Rib/Spine/Hip 0.0%</td>
</tr>
<tr>
<td>Radius/Ulna 38.7%</td>
<td>Radius/Ulna 27.5%</td>
</tr>
<tr>
<td>Wrist/Hand 9.7%</td>
<td>Humerus 33.3%</td>
</tr>
<tr>
<td>Femur 0.0%</td>
<td>Femur 2.0%</td>
</tr>
<tr>
<td>Tibia/Fibula 16.1%</td>
<td>Tibia/Fibula 13.7%</td>
</tr>
<tr>
<td>Foot 12.9%</td>
<td>Foot 13.7%</td>
</tr>
</tbody>
</table>

**Methods**
- Encounters for patients 6 months to 15.5 years were identified between 7/01/16 to 6/30/17 in the Pediatric Health Information Systems database
- Exclusion criteria was applied for conditions predisposing to fracture, history of PPI during the or 6 months preceding study period
- Encounters were classified as H2RA encounters if a charge for H2RA was documented
- H2RA encounters were propensity matched to non-H2RA, non-PPI encounters
- Patients were evaluated over a 2-year period for hospitalizations resulting from fracture

**Conclusions**
- Histamine 2 receptor antagonist exposure does not increase the risk of fractures when compared to risk in children without H2RA or PPI exposure
- No significant differences were found in the fracture location and age at time of fracture among the H2RA exposed and unexposed cohorts