Association Between Proton Pump Inhibitor Use and Risk of Fracture in Children

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The key findings are:

1. Main Finding:

- In this large Swedish nationwide cohort study, proton pump inhibitor (PPI) use was associated with a small but statistically significant 11% increased risk of fracture in children.

2. Study Details:

- The study compared 115,933 children who initiated PPI use with 115,933 matched children who did not
- Mean follow-up time was 2.2 years
- Mean age of children was 12.6 years, and 61.1% were girls

3. Specific Findings:

- PPI use was associated with increased risk of:
  - Upper-limb fractures (8% increase)
  - Lower-limb fractures (19% increase)
  - Other fractures (51% increase)
- No significant associations were found with head fractures or spine fractures
- The risk increased with longer duration of PPI use:
  - ≤30 days: 8% increased risk
  - 31-364 days: 14% increased risk
  - ≥365 days: 34% increased risk
- The association was mainly observed in children 6 years and older

4. Study Limitations:

- Potential residual confounding cannot be ruled out: some important factors were not captured (e.g., daily dose, race/ethnicity, BMI, physical activity)
- Over-the-counter medication information was not available
- Exposure was based on filled prescriptions rather than actual drug use

5. Clinical Implications:

- The findings suggest that the risk of fracture should be considered when weighing the benefits and risks of PPI treatment in children
- The association, while statistically significant, was relatively small in magnitude

The researchers concluded that while PPI use was associated with a small increased risk of fracture in children, this risk should be factored into clinical decision-making when prescribing these medications to paediatric patients.