

Long-term use of PPIs appears to be safe in children

Clinical question Is long-term therapy with proton pump inhibitors safe for children?

Bottom line Long-term proton pump inhibitor (PPI) therapy (median treatment duration 35.2 months) appears to be safe for children. Serum gastrin levels remained elevated in nearly 75 per cent of children, but there was no evidence of an increased risk of carcinoid tumour, abnormal vitamin B₁₂ absorption or any other concerning outcome.

Synopsis Concerns about the long-term use of PPI therapy in children include an increased risk of carcinoid tumours, rebound hypersecretion, atrophic gastritis and enteric infection, as well as abnormal vitamin B₁₂ absorption. These investigators retrospectively reviewed the medical records of all children (mean age 7.5 years; range 0.1–17.6 years) consecutively evaluated for gastro-oesophageal reflux disease at a specialty gastroenterology outpatient clinic. Eligible patients (n=117) included those receiving continuous PPI therapy for at least one year with a baseline gastric biopsy performed before the initiation of therapy. Complete follow-up with at least one repeat endoscopy occurred for 97 per cent of children, for a mean treatment duration of 32 months to 47 months. The authors do not specifically state whether individuals assessing outcomes

remained blind to the study hypothesis or individual drug therapy. No significant differences in symptom improvements were reported between various PPI types or dosing frequencies. The most frequently observed histological findings during treatment included parietal cell hyperplasia and non-specific gastritis. No precancerous hyperplasia was observed. Vitamin B₁₂ levels and liver function test results remained in the normal range in all patients during the entire course of therapy. Above-normal serum gastrin levels were seen in 73 per cent of children. The most frequent adverse events included diarrhoea (5 per cent) and constipation (4 per cent).

Level of evidence 1b- (prospective cohort study with good follow-up but inconclusive)

Reference Tolia V, Boyer K. Long-term proton pump inhibitor use in children: A retrospective review of safety. *Digestive Diseases and Sciences* 2008;53(2):385–93.

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