Abstract


Perils and pitfalls of long-term effects of proton pump inhibitors.

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OBJECTIVE: This review summarizes the literature regarding long-term adverse effects of proton pump inhibitors (PPIs).

METHODS: A PubMed search (1966 to February 2013) for English language studies was conducted using key terms PPI: omeprazole, esomeprazole, pantoprazole, lansoprazole, dexlansoprazole, rabeprazole, pneumonia, Clostridium difficile, osteoporosis, risk of fractures, thrombocytopenia, rhabdomyolysis, anemia, iron deficiency, hypomagnesemia, vitamin B₁₂ and nephritis.

RESULTS: The risk of pneumonia was increased 27-39% in short-term use of PPIs in three meta-analyses. C. difficile infections were also associated with the use of PPIs (odds ratio: 2.15; 95% CI: 1.81-2.55; p < 0.00001). This effect appears to be dose related.

CONCLUSIONS: The US FDA has recently issued a warning regarding fractures and the impaired magnesium absorption associated with the use of PPI. Thrombocytopenia, iron deficiency, vitamin B₁₂ deficiency, rhabdomyolysis and acute interstitial nephritis have also been reported with the use of PPIs. There is mounting evidence that PPIs are associated with serious adverse effects. Practitioners should be vigilant and counsel patients accordingly.

PMID: 23927671