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Dr Paul Moayyedi' Biography

Dr Paul Moayyedi qualified from Bristol University and obtained a PhD and Masters in Public Health from the University of Leeds. He moved to McMaster University in 2004 and became Director of the Division of Gastroenterology at McMaster in 2006. He has published over 300 peer-reviewed articles and 19 book chapters with an h index of 95 and his work has been cited over 36,500 times. He was joint editor-in-chief of the American Journal of Gastroenterology 2010-2015 and is currently joint coordinating editor of the Upper GI and Pancreatic Diseases Cochrane Review Group. He has been involved in many guidelines developed in UK, Canada and the US.

Presentation Blurb

Fifty years of peptic ulcer revolution
Section 3: *Adverse effects of proton pump inhibitor therapy*

Proton pump inhibitors (PPIs) dramatically reduce gastric acid secretion and are the mainstay of treatment for gastro-oesophageal reflux disease (GERD). The effect is one of the strongest seen in clinical medicine with a number needed to treat of < 2 and a significant improvement in quality of life that suggests these drugs are cost-effective in GERD (1). PPIs are also a key treatment for peptic ulcer disease not related to *Helicobacter pylori* such as those related to non-steroidal anti-inflammatory drugs or idiopathic aetiology. PPIs have been one of the most widely prescribed medications in the developed world and randomized trials involving over 100,000 participants have suggested they are remarkably safe in the short-term with no adverse event more common than placebo. More recently, however, concerns have been raised regarding the long-term safety of PPI therapy when administrative databases evaluate the association between their prescription and various adverse outcomes.

The rise is administrative databases has allowed researchers to mine for associations with hundreds of thousands and even millions of patient year follow up. Previous generations of epidemiologists could not have conducted studies with the power to detect the modest associations that current database studies are producing. This is a powerful tool but needs to be interpreted with caution. PPIs are good example of this issue. PPIs have been associated with pneumonia, fracture, heart disease (in patients taking and not taking clopidogrel), *clostridium difficile* associated diarrhoea, chronic renal failure, gastric cancer, dementia and even all cause mortality (2). A careful analysis of these data, however, reveals that these associations are not robust. There are concerns in some cases of protopathic bias and also publication bias. The major concern is that nearly every studies has found that sicker patients tend to be prescribed PPIs and those with multiple comorbidities are more likely to go on to develop other diseases. Researchers writing these articles too easily dismiss the possibility that these results could be due to residual confounding and this remains the likely explanation of some if not all of the association between PPIs and adverse outcomes (3).

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References

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