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eComment. The evidence for stress ulcer prophylaxis in patients undergoing cardiac surgery

Authors: Akshay J. Patel and Robin Som

St Georges' Medical School, University of London, London, UK,
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We read with interest Shin and Abah's Best Evidence Topic [1] regarding stress ulcer prophylaxis in patients undergoing cardiac surgery, as we have conducted a similar search for this topic recently.

Whilst we agree with the authors that routine acid suppression is warranted in patients undergoing cardiac surgery, we feel the conclusion that there is increased risk of pneumonia is of debatable significance within the context of cardiac surgery. Shin and Abah extrapolate this notion from a meta-analysis of acid suppression and risk of pneumonia [2]. This is a meta-analysis of a wide range of studies set predominately in non-cardiac surgical units. Due to the unique nature of open heart surgery, it will be extremely difficult to attribute the risk of pneumonia to acid suppression. This risk must be balanced with the morbidity and mortality of gastrointestinal (GI) haemorrhage in these patients.

There are several other studies of note assessing ulcer/GI haemorrhage prophylaxis in cardiac surgery patients. Johnston et al. prospectively recorded GI complications in 5,348 consecutive patients undergoing cardiac surgery over 8 years [3]. 41 patients developed acid-peptic complications. Gastric ulceration was the most common GI complication; interestingly, this was despite use of H₂-receptor antagonists for prophylaxis. However, less than 15% of these patients received prophylaxis for more than 24 hours. Johnston et al. conclude that patients suffering acid-peptic complications are distinct from those suffering other GI complications, and should receive aggressive prophylaxis.

Finally, our search identified a prospective study of 2285 consecutive patients undergoing cardiac surgery [4]. The group receiving proton-pump inhibitor prophylaxis (PPI) had a significantly lower risk of GI bleed than the group without GI bleed prophylaxis.

Our search, like Shin and Abah's, found only one randomised control trial (RCT) assessing acid-suppression and risk of GI haemorrhage in patients undergoing cardiac surgery [5]. Further RCTs to fully ascertain the most effective class of drug for preventing GI complications post-cardiac surgery in terms of post-operative incidence, optimum dosing and timing regimes, and cost are warranted.

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