Comparison of two antacid preparations on intragastric acidity – A two-centre open randomised cross-over placebo-controlled trial

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Abstract

BACKGROUND:

Rennie and Riopan Gel are 2 of the most well-known and popular over-the-counter antacids; for heartburn symptoms, pain relief is fast with both preparations. A direct comparison with respect to intragastric acidity has not been done yet. The aim of our study was therefore to compare the effects of both preparations on intragastric acidity of fasting volunteers.

METHODS:

The study was conducted as an open, randomised, placebo-controlled, 2-centre cross-over study. On different days, 24 healthy adult volunteers (11 males and 13 females) received equimolar acid-neutralising amounts of either Riopan Gel (800 mg magaldrate) or 2 tablets of Rennie (680 mg calcium carbonate and 80 mg magnesium carbonate) or no drug (control) with a wash-out period of at least 4 days between applications. The intragastric pH was measured for 3 h by intragastric pH-metry. The primary endpoint was the median time lag before intragastric pH >3.0 was reached for 10 consecutive min after drug administration.

RESULTS:

For both antacids, the median pH during the first 30 min after drug administration was statistically significantly different from placebo (p < 0.05), but there was a statistically significant increase in pH during the first 5 min for Riopan Gel only.

CONCLUSION:

Compared to placebo, both antacids (Rennie and Riopan Gel) have short-lasting effects on intragastric acidity. There is no statistically significant difference
between the 2 preparations, except in the first 5 min, indicating a faster onset of action for Riopan Gel. We conclude that the antacid formulation (tablet or liquid) has little influence on intragastric acidity.

**keywords**
- antacids, gastric pH-metry, Rennie, Riopan

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