1. The effect of ethanol (2 g/kg BW) on the gastrointestinal motility and calcium transport across the intestinal epithelia were investigated in female Fisher rats to find out the effect of ethanol on net calcium absorption.

2. Both acute (2 g/kg BW) and chronic (4 weeks of 20% ethanol as drinking water) ethanol treatments resulted in a significant delay in gastric emptying and the intestinal propulsion seemed to be slower when compared to the control. It was also shown that intestinal propulsion in chronic ethanol treated group was slightly faster than that in the acute ethanol group.

3. Acute intraduodenal ethanol administration (2 g/kg BW), however, had an accelerating effect on intestinal propulsion, which may be due to the intraluminal or systemic effect of ethanol that was exerted on mucosal and/or muscle cells directly or via the nerves supply.

4. The appearance of $^{45}$Ca in plasma after intragastric administration of test solution was the same in control and ethanol treated animals. However, an intraduodenal administration was shown to enhance the absorption of $^{45}$Ca. This difference was explained by ethanol-induced delay in gastric emptying after an intragastric administration.

5. The stimulation of calcium absorption by acute ethanol was confirmed by the in situ loop method. The results clearly showed that ethanol stimulated the absorption of calcium in both duodenal and ileal loops. Ethanol appeared to be more effective in enhancing the calcium absorption in the duodenum than in ileum. Moreover, the net fluid absorption was less in the presence of ethanol.
In conclusion, ethanol (2 g/kg BW) given intragastrically had no effect on the calcium absorption but when given intraduodenally, it enhanced translocation of calcium from lumen to blood and increased intestinal motility. The lack of effect after intragastric administration was likely to be due to ethanol-induced delay in gastric emptying.
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