Reviewer's report

Title: Inhibition of the oxytocin receptors delays gastric emptying

Version: 1 Date: 28 December 2005

Reviewer: Ad A Masclee

Reviewer's report:

General
The authors studied the effect of oxytocin, the oxytocin receptor antagonist atosiban and placebo on postprandial gastric emptying and on postprandial symptoms. It was found that the oxy-antagonist delayed gastric emptying while oxtocin, in contrast to expected did not accelerate emptying. The aim of the study is relevant and the authors have published recently on oxytocin and colonic motility.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

With respect to methodology several aspects need to be considered:
- method for gastric emptying: with US only a cross sectional area of the antrum was measured while nowadays 3D ultrasound images reflecting volume can be obtained.
In addition, the areas were measured only at two time points that is at the beginning and at time 90 min. Within this time frame data are lacking. How valid is the method and how valid are two values (of areas) in representing emptying?
- this also holds for satiety scores: data between 15 and 90 min are lacking.
- in contrast to expected, no acceleration of GE (i.e. reduction in area) was observed with the dose of oxy employed. More precisely, the emptying even was reduced with oxy. This should be clarified. Additional doses of oxy (dose response) might have clarified this item and there is concern about the method to calculate emptying.
- For plasma oxy levels in response to the meal (and infusion) the authors refer to a previous study and an unpublished observation. Since the authors are capable of measuring plasma oxy levels, the levels from the present study should be measured and provided (post meal, infusion of oxy, antagonist).
- information on the specificity of the antagonist should be given.
- the antral area at 15 min in the atosiban experiment was smaller compared to placebo. The authors refer to a retention of the meal in the stomach while, on the other hand also more rapid emptying may have occurred.
- in animal experiments oxy is known to delay gastric emptying (authors Wu CL, Liu CY), please clarify
- additionally: provide individual data of areas (scattergram). Perhaps it is better to refer to areas instead of emptying data

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

some spelling and grammar errors throughout the manuscript

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Discretionary Revisions (which the author can choose to ignore)
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

'I declare that I have no competing interests'