Reviewer's report

Title: Impact of treatment policies on patient outcomes and resource utilization in acute cholecystitis in Japanese hospitals

Version: 1 Date: 21 December 2005

Reviewer: Alfredo Carbonell

Reviewer's report:

General
The authors have critically analyzed the outcomes of cholecystectomy for acute cholecystitis at 9 tertiary care, teaching hospitals. They sought to determine the impact of different institutional strategies used to treat acute cholecystitis on patient outcome and medical resource utilization. The results demonstrate that although certain hospitals perform laparoscopic cholecystectomy for acute cholecystitis more often, there are higher intraoperative complications, shorter time to oral diet, and shorter length of stays associated with the minimally invasive approach on multiple logistic regression. What is interesting is that there appears to be no postoperative complication difference between the open and laparoscopic approach. These results must be tempered with the knowledge that the study hospitals utilize a delayed surgery approach to acute cholecystitis, with a mean preoperative and postoperative hospital stay of 17.1 and 13.8 days respectively. Although postoperative length of stay is decreased in hospitals more commonly performing laparoscopy, the total length of stay is no different. As well, total charges do not vary between the hospitals when grouped according to laparoscopic cholecystectomy prevalence. The study demonstrates that in Japan, both open and laparoscopic cholecystectomies for acute cholecystitis are equivalent in regards to hospital resource utilization.

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

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

The second and third panels of Figure 1 do not add to the understanding of the data and should be removed.

Discretionary Revisions (which the author can choose to ignore)

The study points to a large discrepancy in treatment strategies for acute cholecystitis between the nine teaching hospitals involved. This may be explained, partly, by the wide difference in age and comorbidity index of the patients treated at the different hospitals. To clarify this, the authors should seriously consider placing a third table demonstrating the multiple logistic regression analysis with the appropriate Odds Ratios. This would be more useful than Tables 1 and 2, since the covariates which can significantly affect outcome would be controlled for.

An article published by our group 6 months ago utilizing a large national inpatient payer database (Carbonell et al, Surg Endosc. 2005 Jun;19(6):767-73), addressed a similar patient population and found laparoscopy and intraoperative cholangiogram to have protective effects against morbidity.
The authors should consider reviewing the article for its relevance to their study.

**What next?:** Accept after minor essential revisions

**Level of interest:** An article of limited interest

**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