Reviewer's report

Title: The song remains the same although the instruments are changing: Complications following selective non-operative management of blunt spleen trauma: A retrospective review of patients at a level I trauma centre from 1996 to 2007

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Reviewer: Julie Mayglothling

Reviewer's report:

The authors evaluate the success rates of various management strategies of blunt splenic injuries. In addition, they evaluate the characteristics and outcomes of patients with blunt splenic injuries that fail selective non-operative management (SNOM), as well as the use and effectiveness of follow-up imaging. The study is a retrospective review from trauma registry data of all adult trauma patients with blunt splenic injuries admitted to Foothills medical center from 1996-2007 (n=538).

Strengths

The authors’ goal to address the question of who needs repeat imaging after blunt splenic injury is a good one and one that does not have a clear answer in the literature. I think the majority of the manuscript should be dedicated to this question and how the authors’ data supports or debates the published data.

Major Compulsory Revisions

1. I think the authors are trying to do a bit too much in this manuscript, and the useful information they have to present is a bit diluted by some data that is just not helpful. They should truly concentrate on 1. Who failed SNOM and why? and 2. What the usefulness of follow-up imaging is (frequency and timing). These good questions are being lost in the sea of other data. There was considerable time and space dedicated to the differences between the OM and SNOM groups. It is well established that patients necessitating OM for splenic injuries are sicker, have higher grades of injury or are hemodynamically unstable. I don’t think the amount of space in the manuscript dedicated to describing these two populations adds anything to the literature that isn’t very well accepted and the section on ED Investigation and Physiologic data doesn’t seem necessary. In addition, tables 1, 2 and 3 are overrun with extraneous data. I would consolidate this into 2 tables and cut out much of the data.

2. The biggest question that did not seem to be addressed is why did the patients undergoing SNOM fail? Should they have gotten SAA and SAE from the beginning? We know, by published studies, factors that increase risk of failure of SNOM are higher grade of injury, amount of hemoperitoneum, presence of pseudoaneurysm or contrast blush on CT. The manuscript didn’t even mention
this. The question that was not answered, and is important to know, is did the people that failed SNOM meet these criteria? Is that possibly why the percentages of SAA and SAE (9 and 7%) are so low? If they did, they weren’t really being treated appropriately and therefore, it doesn’t add to the knowledge base. More time needs to be dedicated to looking at this patient population.

3. The bottom of page 10 (Inpatient Acute Care Outcomes) states that “Among those selected for NOM, 16% went on to have a splenectomy (9%), splenorrhaphy (2%), or laparotomy…” but then the rest of the section is dedicated to lengths of stays and deaths. The one paragraph is trying to say too much. Put the failures of SNOM in the next section and just delete the ICU data.

Minor Essential Revisions

4. Figure 1 is misleading. If none of the mortalities in the SNOM group were due to splenic injury, this figure doesn’t mean much. Almost all of the causes of death are listed as “multiple blunt injuries” and “massive head injuries”. One could argue that these are patients that are not appropriate for SNOM. Even more reason to take this out.

5. The authors admit that only 50% of patients were from Calgary and they used that database to query for follow-up. Right there, that limits the follow-up data. Can you really make adequate conclusions about late follow up imaging, missed injuries and the usefulness of outpatient CT with maximum 50% follow-up?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests