Reviewer’s report

Title: A Systematic Review of Pediatric versus Adult Patients in Current Pectus Excavatum Treatments

Version: 1 Date: 16 September 2013

Reviewer: Andre Hebra

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Major Revisions:
1. The authors should consider changing the title from "A Systematic Review of Pediatric versus Adult Patients in Current Pectus Excavatum Treatments" to "Systematic review of surgical treatment techniques for adult and pediatric patients with pectus excavatum"

2. In page 3, Introduction, the authors stated: “While PEx is often considered a purely cosmetic disorder, Kelly and colleagues reviewed autopsies and concluded that patients with PEx have a shorter life expectancy”. There have been several articles published that describe the cardiopulmonary impairment caused by pectus excavatum, particularly in pediatric patients. The authors should add a statement about such observations as they are already describing factors related to the indications for surgical treatment.

3. Under Discussion: Authors should comment about the occurrence/reports of life-threatening complications and mortality of pectus surgery. Given the fact that there are few reports in the literature and that most are “case reports”, it is difficult to extrapolate any information related to such rare adverse outcomes.

4. Under Discussion: (page 11) Authors make comments related to cost comparison. They mention that the “the need for greater lengths of stay and pain management suggest that the Nuss procedure is more expensive”. Should add a comment that the “greater operative time of the Ravitch approach may offset the added cost of the Nuss procedure” (However specific data is not provided).

5. Under Conclusion (page 15): “…In addition, as new procedures are developed, such as the vacuum bell and mini-magnetic mover, they need to be compared with the Ravitch and Nuss procedures, which have become the standard for PEx treatment.” Change to “…have become the accepted standard for PEx treatment.”


Minor Revisions:
1. In the abstract, the authors must clarify: “Excluding displacements, pediatric
and adult Nuss patients (38% and 21% respectively) tended to have higher complication rates compared to pediatric and adult Ravitch patients (12.5% and 8% respectively)”. What do the 38%, 21%, 12.5% and 21% refer to? Consider re-writing the sentence to clarify.

2. Page 4: must correct the statement: “…the force required to elevated the…” (change “elevated” to “elevate”).

3. Page 5: must correct the statement: “…publications that described surgical techniques that different significantly from current techniques…” (change “different” to “differ”)

4. Page 5: The authors should clarify the meaning of “non-displacement” and “self-resolving” complications. What is included in each category?

5. Page 7: change “atelectases” to atelectasis”

6. Page 8: authors stated “The good-excellent outcomes, however, were similar across all three procedures (Nuss 95%, Ravitch 96%, Robicsek 89%).” Authors should make a comment related to the subjective nature & limitations of such assessments like “good-excellent, excellent”.

7. Page 10: change “…demonstrated showed…” to “demonstrated”

8. Page 14, Discussion: “…In doing so, this study answers the question about the age appropriateness of different PEx treatments – namely the Nuss procedure and highly modified Ravitch procedure.” Revise to: “In doing so, this study attempts to address the question about the age appropriateness of different PEx treatments…”

9. Under Conclusions (page 14): “…While many surgeons suggest that operating on children and adolescents results in better outcomes, the literature fails to corroborate this.” Should add a statement: “However many studies support the observation that the Nuss procedure is easier to perform in younger patients”.

Level of interest: An article of importance in its field

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

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