

OBSTETRICS & GYNECOLOGY



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obgyn@greenjournal.org.

Date: Aug 06, 2019
To: "Mark D. Pearlman" [REDACTED]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-19-1045

RE: Manuscript Number ONG-19-1045

Trauma in Pregnancy: Guidance for Evaluation and Management of Blunt Abdominal Trauma in Pregnancy

Dear Dr. Pearlman:

Your manuscript has been reviewed by the Editorial Board and by special expert referees. Although it is judged not acceptable for publication in Obstetrics & Gynecology in its present form, we would be willing to give further consideration to a revised version.

If you wish to consider revising your manuscript, you will first need to study carefully the enclosed reports submitted by the referees and editors. Each point raised requires a response, by either revising your manuscript or making a clear and convincing argument as to why no revision is needed. To facilitate our review, we prefer that the cover letter include the comments made by the reviewers and the editor followed by your response. The revised manuscript should indicate the position of all changes made. We suggest that you use the "track changes" feature in your word processing software to do so (rather than strikethrough or underline formatting).

Your paper will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Aug 27, 2019, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

Reviewer #1: Clinical expert series article on evaluation and management of blunt abdominal trauma in pregnancy. Well written and good detail.

1. Line 77 - reference here please
2. Line 93-105 - this paragraph would benefit from quantifying the various rates of mortality, trauma, etc discussed
Line 106-107, 109-110 - please revise numbers here as these two sentences add up to 100% of cases but in line 114-115 assault as a cause is discussed
3. Line 107-108 - please quantify decreased morbidity and mortality
4. Line 146-148 - what are other signs of hemorrhage that providers should watch for early on to detect bleeding?
5. Line 173-175 - how does this distance change? Please provide more detail
6. Line 203-206 - reference here please
7. Line 208-209 - please quantify this and reference needed
8. Line 231 -233 - please provide more detail as to what ROTEM is here
9. Line 267-269 and 272-274 - references here please
10. Line 288-290 - what about simulation of obstetric trauma for the interdisciplinary team to ensure standard approach to care?
11. Line 331-333 - what does ACS and states require for a level 1 trauma center concerning in house ob?
12. Line 354 - who are these multiple in-house ob providers notified?
13. Line 388-389, 490-492, 492-495, 517-518, 520-522, 579-581, 587-588 - references here also
14. Line 496 - please define or provide examples of what is considered "minor trauma"

15. Line 536 - who is the "some" in this sentence? please be specific to who is being referenced here
16. Line 541 - who is the "others" here and provide references for them
17. Line 549 -551 - please correlate this paragraph to the care of the pregnant trauma patient and provide more detail
18. Figures with algorithms for viable and pre-viable pregnancies well done and very helpful. On the pre-viable algorithm, please add when the ob provider should be notified.

Reviewer #2: Thank you for the opportunity to review this interesting and well written manuscript. It covers an area that may not be well known to OBGYN physicians. I do have some minor comments for the authors:

1. Page 4, Line 91: This "series"? I am not sure what the authors are referring to. Do they mean: This paper or this manuscript? What "series" are they referring to?
2. I found the paragraph that starts on page 15, line 341 a bit confusing and maybe too detailed for the reader. Maybe remove the sentences that start "The Medical First Responder can activate the..." that ends with endnote #56.
3. On page 17, line 381 the authors describe the massive transfusion protocol as being 1:1:1 blood products. It might be better to be more specific as to which blood products they authors mean (PRBC, platelets and FFP) for readers who may not know.
4. Ob page 23, line 523, the authors describe how to provide chest compressions and recommend left lateral tilt. I thought it was better to push or pull the uterus laterally rather than tilt the patient--because when the patient is tilted the chest compressions are harder to perform and less effective.
5. On page 23, line 529, the authors refer to bilateral chest compressions. I am afraid that I am unfamiliar with that. Could the authors describe it.
6. Have the authors seen the recent publication: MacArthur B, et al. Trauma in Pregnancy: A Comprehensive Approach to the Mother and Fetus. Am J Obstet Gynecol May 2019 pages 465-8? The authors recommend a Maternal-Fetal Trauma Checklist. I would suggest that the authors consider referencing this checklist in their article.

Reviewer #3: Overview-

Of the many reviews I have performed for OG & other journals, this manuscript wins the prize for the longest I have reviewed. And that is the primary problem with this manuscript. While this paper would represent a good read for OB residents & MFM fellows, because of its length, I don't see it being read by very many generalist OB, if any. The second problem with this paper is the target audience. Who is it? OBs & ER/trauma doctors? Given that the manuscript was submitted to OG, one must assume that the intended target audience is OB's. However, much of the information on physiology (P6-8) and OB issues (P9-12) should be known to OBs and as such are unnecessary. Other information regarding ATLS is irrelevant. However, if the target is non-OB providers, then those pages contain excellent information, but other information in the manuscript would be redundant. The manuscript is relatively well written, although a surprising number of grammatical/stylistic errors are present.

Online review of the authors demonstrate one to be a generalist, one fellowship trained infectious disease, and one MFM. While the authors thanked Dr. Napolitano, general surgery/critical care & Dr. Kronick, why were they not included as authors, given that much of the material in the manuscript is non-OB in origin and reference. The paper discusses the importance of multidisciplinary care, so I would expect multidisciplinary authorship. Finally, regarding this reviewers background in pregnancy & trauma, the reviewer is MFM/critical care and worked at Level I-III trauma centers in different states.

Abstract:

1. L47 "best managed". This statement is an opinion, and I question it's role in this document.

Introduction:

2. L 61 "may have". While "may" & "can" recently have been used interchangeably in common usage, with scientific writing that has an international readership (such as OG), consideration should be given to using "can" for ability, and "may" for permission.
3. L66 "patients' care". Given that you use "a pregnant...", presumably singular form of patient, should be "patient's".
4. L66 "an obstetricians' specialized.." as prior line, an implies singular, should be "obstetrician's"

5. L83 "This results.." "this" what? "Case series" is the closest prior noun, I assume "this" is not referring to "this"
6. L84 "There have been.." As with "may", the use of "there" is grammatically permissible, but not commonly used in scientific writing given the accompanying passive verb "have been.." etc.
7. L102 Are higher admission rates of pregnant women because of mandatory fetal monitoring? If so, address.
8. L106 "Motor vehicle crashes (MVC)" or MVA? Is one preferred? If MVC new preferred, would suggest noting the change from MVA so all are educated to latest.
9. L109 "the second most common cause are falls," "cause of what? trauma?"
10. L111-113 is a difficult sentence to read. I had to read it twice to understand.
11. L114 "may also..." as above for may usage
12. L148 "may" , L 149 "can"; L150 "may"; L152 "may" Would recommend seeking consistency
13. L151 Is fetal hypoxia in the presence of normal maternal vital signs common? If not, would not include it
14. L153 "non-reassuring fetal heart rate" - is this usage common today?
15. L161-164 is another lengthy, difficult to read sentence.
16. L165 "there are.."
17. L174 Is this change clinically important? if not, leave out.
18. L177-178 O2 even in the absence of hypoxemia or hemorrhage?
19. L198- Later you discuss use of NGT as usual, here you state "if". Pregnant women should be presumed to have a full stomach, so if intubating emergently, preventing aspiration is key, but aspiration can still occur with intubation, so probably good idea to pass NGT, empty contents & then remove if clinically unnecessary.
20. L210 "these tissue properties difference". Consider "these differences in tissue property can create.."
21. L218 does highly sensitive reference abruption? Unclear as written
22. L222 "may" & L224 "ca"
23. L228 "MRI is impractical and not typically used.." Consider "MRI is impractical is not typically used.."
24. L233, L245, L253, "may"
25. L265; L274; L279"there"
26. L272 you can drop "may" here "of why AFE occur"
27. L280 "and" is unnecessary
28. L289 "may"
29. L299 "In a pregnant trauma patient is in..." Did you intend to say "if a pregnant..?"
30. L303 "towel roll under the left side of the backboard". Wouldn't this cause right lateral tilt? did you mean right side of backboard?
31. L304-309 Is this paragraph necessary? I expect some to disagree with having EMS make this decision, unless 2 hospitals are equidistant & one has OB & the other doesn't. In that situation, as you mention in L313 & for Michigan care, the EMS team should be aware of. If not, the receiving unit can inform via voice communication recommendations to divert to an OB hospital equidistant. Otherwise, if optimizing maternal care is best for fetal health (as you state later), shouldn't the mother be transported to the closest hospital that can care for her? If she becomes hypotensive or dies during transport to farther unit that has OB, what has been gained?
32. L321 Would recommend explaining that unlike Neo unit levels (with IV highest), with which OB's are familiar, ACS highest is I.

33. L322-323-"verification" comment unnecessary
34. L336 -339 is a long difficult to read sentence. Is it necessary?
35. L341 Why introduce Michigan? are you putting forward Michigan policies as an example? if so, would suggest stating it. Otherwise it reads like the older Williams, "at Parkland, we" which some found condescending. Is this paragraph necessary?
36. L342 "they have specific protocols.."Closest noun is "County". Is "county" to what "they" is referencing?
37. L341; L344 "There"
38. L356 "this prompts..." To what does "this" refer? "system"?
39. L368 The best sentence in this article. Should be closer to the beginning.
40. L370 Please reference ATLS when discussing "standard trauma care".
41. L377 ATLS is very clear about establishing 2 large bore IV's. Many OB's are unaware of this need.
42. L380 "as this is.." This what?
43. L386 Vasopressors are usually a last resort as they have complications for non-pregnant trauma patients as well. Is this sentence necessary?
44. L403- While you mention early ultrasound later, could you also introduce use of ultrasound here. It can usually be done during initial survey, determining alive/dead, gestational age, intrauterine etc.
45. L406 when introducing fetal monitoring, good time to introduce viability- no need to monitor 21 weeker or if mom unstable.
46. L419 "preferred & recommended" Seem duplicative/redundant
47. L436 oral or nasal approach? While most anesthesiologists will place OET, ER & internists/pulm critical care will try NET. OET permits larger tube, better ventilation;
48. L448 Do OB's need to know about pigtail catheters for PTX/HTX? probably not.
49. L456 Are OB's trained in FAST? probably not as many as ER & Gen Surg. does this need to be included?
50. L468 "illness"? trauma paper. Just need "injury"
51. L473- great sentence on imaging. The rest is unnecessary.
52. L476 consult a radiologist in the trauma suite? is this comment necessary?
53. L491 "is considered somewhere between 22 and 24 weeks" are "somewhere" & "between" both needed?
54. L498 "24 hours if there are uterine contractions" consider "24 hours if uterine contractions,..."
55. L501 "and should be continued" What should be continued, fetal monitoring or location?

Reviewer #4:

ABSTRACT

Line 42 - 43: MVA, falls: these are not underlying mechanisms, rephrase

Line 44: change patterns of injury to adverse outcome or results of

Line 50: " ... should play a central role in the evaluation and management of a pregnant trauma patient." Delete

"...given their ..." You might instead move to the end of that sentence "because of the anatomic and physiologic changes in pregnancy and their impact on management"

Line 51: part of all sites caring for pregnant women (shorten to)

INTRODUCTION:

Paragraph 1: combine first 2 sentences, take out line about non obstetric providers NOT having information about impact of pregnancy. It flies in the face of a team collaborative approach to care of the pregnant trauma patient.

Line 69: what do you mean by "outcomes data in this population are not reliably predictable?"

Paragraph 2: redundant, should be shortened

Paragraph 3: combine discussion of limitations of the current literature into a single paragraph (currently in paragraph 2 and 3)

Paragraph 4: include reported risk for fetal death following abdominal trauma

Line 98: as in the abstract, change the word mechanism

Give percentages for MVA, rate of admission (for pregnant vs non pregnant). Reported percent (and range) for abruption, preterm birth etc. Some of this information is in paragraph 5 And should be consolidated.

Anatomic changes:

Is the 25% rate of hepatic/splenic injury different from that of nonpregnant trauma patients? As written the authors imply a difference

Cardiovascular and hematologic changes:

There is literature about impact of blood loss on maternal blood pressure/pulse etc. Can you compare this to the expected response in nonpregnant individuals?

"sagging" ST segments?

PATTERNS OF TRAUMA

What is the reason for higher rates of extremity and lower rates of head trauma in pregnancy?

PLACENTAL ABRUPTION

Are contractions more sensitive for the diagnosis of significant placental abruption or FHR changes?

What is the sensitivity of ultrasound for the detection of abruption, what are sonographic findings.

How sensitive is fibrinogen for the diagnosis of abruption, particularly in a trauma patient whose other injuries may lower fibrinogen. Do you recommend different (longer, more intense) monitoring based on fibrinogen? How often do you check these levels. It is unlikely that someone with DIC from placental abruption will not have other significant findings including non-reassuring fetal status. do you recommend a coagulation profile for all women with abdominal trauma in pregnancy?

ROTEM sounds interesting, and will be new to most readers. Suggest you expand on the clinical performance of this test in pregnant trauma patients.

AMNIOTIC FLUID EMBOLUS

Frequency? Case reports only? There are many causes for sudden unexplained maternal hypotension and hypoxemia.

As written, without more specific clinical findings (DIC), this is misleading.

POLICIES

A general review of recommendations or a link to Michigan's protocols would be more helpful. The number of ambulance services in Washtenaw county is not needed.

PRIMARY SURVEY

As written it appears that the authors are recommending the use of tranexamic acid for hemorrhage in pregnant patients - remove or rephrase.

Shorten paragraph on assessment of fetal/maternal hemorrhage. How do you interpret, how do they impact management, duration of observation. Do you recommend for all pregnant trauma patients? Give specifics on dosing rhogam depending on estimated volume of bleed.

Overall - this is a good summary of the management of MAJOR abdominal trauma in pregnancy. As written, however, it is redundant and lengthy. The focus is definitely on the less common cases of major trauma, and in the non-obstetric management of pregnant trauma patients.

The article should include more obstetric management information for major and (the more common not major) abdominal trauma: such as duration of monitoring in the presence or absence of contractions, frequency of laboratory evaluation, management of preterm labor if it occurs following blunt abdominal trauma, follow-up after discharge etc.

The strength of the clinical expert series for clinicians is guidance for management of diagnoses, with specific recommendations - based on literature or in this case of experts, on expert opinion and experience.

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4. Standard obstetric and gynecology data definitions have been developed through the reVITALize initiative, which was convened by the American College of Obstetricians and Gynecologists and the members of the Women's Health Registry Alliance. Obstetrics & Gynecology has adopted the use of the reVITALize definitions. Please access the obstetric and gynecology data definitions at <https://www.acog.org/About-ACOG/ACOG-Departments/Patient-Safety-and-Quality-Improvement/reVITALize>. If use of the reVITALize definitions is problematic, please discuss this in your point-by-point response to this letter.

5. Because of space limitations, it is important that your revised manuscript adhere to the following length restrictions by manuscript type: Clinical Expert Series articles should not exceed 25 typed, double-spaced pages (6,250 words). Stated page limits include all numbered pages in a manuscript (i.e., title page, précis, abstract, text, references, tables, boxes, figure legends, and print appendixes) but exclude references.

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Again, your paper will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Aug 27, 2019, we will assume you wish to withdraw the manuscript from further consideration.

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