Reviewer's report

Title: Successful negative pressure wound therapy for necrotizing fasciitis in a child with cyclic neutropenia

Version: 1 Date: 6 August 2014

Reviewer: Joan Robinson

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The authors report a single case of necrotizing fasciitis that seemed to respond to negative pressure wound therapy. The child was subsequently found to have cyclic neutropenia.

Major compulsory revisions

1. In the Case Presentation, please provide a few more details about the previous medical history. What type of respiratory infections was the child admitted for? How many admissions were there and how long were they? Did she have any outpatient infections that required antimicrobials?

2. What do you mean by “idiopathic cyclic neutropenic events”?

3. Was the child neutropenic when she presented this time? What were her vital signs (I know that you said she was stable, but I find it hard to believe that they were normal)? Was she in pain? Was her level of consciousness normal?

4. What antibiotics were started? What antibiotics were used in the PICU after debridement? What were the susceptibilities of the Pseudomonas? How long did the bacteremia persist? How long did the neutropenia persist? What day did she come off inotropes? When did the daily surgical debridements end (presumably the day that you started the negative pressure wound therapy but his needs to be clarified).

5. In talking about her neutropenia, what do you mean by “the same events had also been detected in previous medical records.” I ask as you implied earlier that the parents refused investigations for cyclic neutropenia.

6. At what point during the admission did you figure out that the child’s mother had cyclic neutropenia?

7. I do not understand the phrase “and through on-line in silico functional prediction analysis, the variation was predicted as a probable cause of deteriorating protein function” and suspect that many other readers will not understand it either.

8. Although surgical debridement is the preferred therapy for necrotizing fasciitis, I think that it is out-of-date to call it “mandatory”. There are now many case reports of patients surviving despite limited or no debridement, typically because the location or extent of the necrotizing fasciitis makes full debridement impractical.
9. I am curious about previous reports of use of negative pressure wound therapy for necrotizing fasciitis and would like more detail. The reader is referred only to reference 9 (which is not about necrotizing fasciitis) but references 7 and 8 also mention previous cases. Telling the reader what organisms were involved is relevant as it seems possible that the efficacy of negative pressure wound therapy would be related in some way to the pathogen. A table combining this with previous cases might be helpful if there are 5 or more cases.

10. One of the limitations of this report is that you cannot be certain that the negative pressure wound therapy resulted in the child’s clinical improvement. In particular, you have not convinced me that she received optimal antimicrobials. I would also argue that perhaps she got better as she got more neutrophils but you have not given me any information about this. The discussion should be much more tentative about the potential benefit of negative pressure wound therapy for necrotizing fasciitis given the current level of evidence.

Minor essential revisions

1. The abstract could be shorter. Some points are mentioned more than once.
2. Abstract - Please correct: Despite daily wound debridement and irrigation, sepsis was not controlled and fasciitis spread out her chest wall and neck area.
3. Background – “mouth ulcer” should be plural
4. Background – “if not early diagnosed” needs to be re-worded
5. I will not comment further on minor wording changes that should be done as there are too many. The authors should ask a colleague with excellent English skills to review the paper for them. I could always understand their meaning but often the wording is awkward or not grammatically correct.
6. Many of the paragraphs are very long. The paper would be easier to read if they were shorter and more concise. The discussion could be shortened by about one-third without losing any of the important concepts in the paper.

Discretionary revisions

1. Pseudomonas is an unusual cause of necrotizing fasciitis. I would mention somewhere about the fact that invasive infection with this organism was another clue to the diagnosis of cyclic neutropenia.

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

Quality of written English: Not suitable for publication unless extensively edited

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