Author's response to reviews

Title: Non-invasive treatment for severe complex pressure ulcers complicating necrotizing fasciitis: A Case Report

Authors:

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The Biomed Central Editorial Team


Thank you for consideration of our manuscript for publication in your journal. We have reviewed the above manuscript according to your reviewer’s comments.

Reviewer #1 (Marta Losa Igesias)

GENERAL POINTS
1. An unexpected association between diseases or symptoms.

MAJOR COMMENTS
2. The author must explain better with actualized references the research problem involved in this particular case report.
   • Done. See page2-3.

MINOR COMMENTS
3. The patient’s perspective must be deleted. I do not understand why you included this part. It is not relevant.
   • We have deleted this part.
4. Need some language corrections before publication.
   • I have reedited my manuscript according to some published papers. (See manuscript-tracked changes-colored)

Reviewer #2 (Ayse Tulin Mansur)

GENERAL POINTS
1. A respectively new treatment for a common condition (complicated pressure ulcer)

MAJOR COMMENTS
2. This case report is not authentic, as deep and secondarily infected pressure ulcers can been seen. However, whether this case report represents a true case of necrotizing fasciitis or not, is debatable.
   • We have addressed this comments on page 3.5 and 6.
   “It was reported that the wound on ischial tuberosites arouse purulent secretions with labia majora redness on 19 June 2014. She was noticed with high body temperature and labia majora ulceration on 29 June 2014.” (P3)
   “Infections secondary to pressure ulcers are commonly limited to home position. In our study, the patient developed ulceration in genital region which was rarely involved. We concluded that these infections resulted from perianal loose connective tissue and fasciae that affected by home position.”(P5-6)
3. Some of the important dated and times are missing.
   • we have added dates and times on page 2-4.
   “She was injured with her 7-8 thoracic vertebrae and became bedridden 5 years ago.”(P2)
   “She developed fever, anemia, obesity (BMI=30.05kg/m2), and paraplegia was admitted to chronic wound treatment center at around 9 o’clock on 1 July 2014 from home.”(P3)
   “It was reported that the wound on ischial tuberosites arouse purulent secretions with labia majora redness on 19 June 2014. She was noticed with high body temperature and labia majora ulceration on 29 June 2014.” (P3)
“She was initially treated with mezlocillin sodium 6g per day followed by levofloxacin 0.6g daily for 2 weeks by intravenous administration.”(P4)

4. The article did not report a summary of the clinical course of all follow-up visits.
   • We addressed it on page 5.
   “The patient was discharged home in April. No recurrence was reported.”(P5)

5. In the first paragraph of the discussion the authors stated that the ulcers were complicated with necrotizing fasciitis 2 years earlier. In the next paragraph a severe soft tissue infection around the ulcers associated with elevated body temperature and laboratory findings supporting the infection was described. The time of progression is not properly mentioned, so it is unclear whether this is an acute progressive necrotizing fasciitis, or a slowly evolving bacterial soft tissue infection secondary to decubitus ulcer, not involving fascial planes. This tissue should be clarified.
   • In this part, we have made a mistake. It was an acute progressive necrotizing fasciitis that happened several days before admission. We addressed it on page 3.
   “The patient was a 58-year-old Chinese female who presented with severe complex pressure ulcers 2 years earlier.” (P3)
   “It was reported that the wound on ischial tuberosites arouse purulent secretions with labia majora redness on 19 June 2014. She was noticed with high body temperature and labia majora ulceration on 29 June 2014.” (P3)

6. What are the results of bacterial cultures?
   • We addressed it on page 4.
   “Swab from pressure ulcers were cultured, escherichia coli were isolated from the culture and were found to be sensitive to amikacin.”

7. Which type of antibiotics and anti-inflammatory agent were used?
   • We addressed it on page 4.
   “She was initially treated with mezlocillin sodium 6g per day followed by levofloxacin 0.6g daily for 2 weeks by intravenous administration.”

8. It would be good to write the computed tomography findings which indicated to the infection of hip in detail.
   • We addressed it on page 4.
   “Hip computer tomographic scan on her admission to other hospital showed a lesion with rarefaction areas in her sacral and obvious gas shadow on left buttock manifested infection of soft tissue at left hip and ischium on July 22, 2014.”(P4)

MINOR COMMENTS

   • The reference was added. (See page 9)

10. There are several errors of orthography, syntax and phrases. The manuscript should be edited by a native English speaker.
    • We have corrected typographical and grammatical errors. (See manuscript-tracked changes-colored)

11. Patient’s perspective is interesting but not necessary for a case report.
    • Patient’s perspective was deleted.
Reviewer #3 (Abdulrasheed Nasir)

GENERAL POINTS

1. New associations or variations in disease processes

MAJOR COMMENTS

2. The abstract is not adequately representing the report.
   * We have reedited the abstract and deleted several repetitions. (See P2)

   **Abstract**

   **Introduction** Pressure ulceration is a common problem to long-term bedridden patients and traumatic paraplegia individuals. Necrotizing fasciitis can be a life-threatening complication by pressure ulcers, especially for the debilitated elderly patients. In this report, we described a successful use of negative pressure wound therapy with instillation in treatment of severe complex pressure ulcers complicating perianal necrotic fasciitis.

   **Case presentation** A 58-year-old Chinese female admitted to our hospital presented with severe complex pressure ulcers on bilateral ischial tuberosities, left hip, perineum, left sacrooccygeal region with nearly 2 years’ duration. She was injured with her 7-8 thoracic vertebrae and became bedridden 5 years ago. She is also a diabetic. The medical history and laboratory examination outcomes confirmed pressure ulcers complicating necrotic fasciitis. Antibiotic therapy was initiated. Following NPWTi, tropical infection subsided and final closure of the wound occurred after 130 days.

   **Conclusion** NPWTi is a capable treatment protocol with excellent healing time, long-term functional and cosmetic outcomes on debilitated patients suffering severe complex pressure ulcers complicating necrotic fasciitis.

3. The introduction did not well explained the relevance of the case to the medical literature.
   * We addressed it on page 3.

   “Necrotic fasciitis results from serious bacterial infection that spreads rapidly and destroys the body’s soft tissue and fascia planes. In the elderly, it occurs in many cases due to severe complex sacral pressure ulcers. Perianal necrotizing fasciitis generally involves crissum and perineum trigonum, which usually results in septicopyemia, shock and even death (1). The mortality rate ranges from 25% to 45% (2). The problematic wound present major challenges in terms of reconstructive options and the outcome of surgical management.” (P3)

4. The article did not report relevant physical examination findings.
   * We addressed it on page 3.

   “She developed fever, anemia, obesity (BMI=30.05kg/m2), and paraplegia was admitted to chronic wound treatment center.” (P3)

   “Physical examination revealed a high fever (39.2°C) and lower limbs edema. Her heart rate was 104 bpm and blood pressure was 110/80 mmHg (after medication). On neurological examination, she was clear but had hypermyotonia in lower limbs. She was put on a continuous indwelling urethral catheter as absence of sensation in her lower limbs.” (P3)

5. The article did not report a summary of the clinical course of all follow-up visits.
   * We addressed it on page 5.

   “The patient was discharged home in April. No recurrence was reported.” (P5)

6. The case presentation was poorly written and too long for ready to capture the essence of the presentation. There is a lot of repetition and unnecessary statements like in this single case
report, exploring the form of negative pressure wound therapy instillation.

- We reedited the manuscript and deleted several repetitions and unnecessary statements to make the case presentation succinct.

7. It is difficult to appreciate how reduced serum potassium will suggest wound infection.
   - Reduced potassium do not suggest wound infection. We have made some mistakes to this point. And we have reorganized the sentence on page 4.
   “Laboratory tests revealed a high leucocyte count level (WBC=21×109/L), high C-reactive protein level (CRP = 189.6 mg/L), slight anemia (HGB=96g/L) and low serum potassium level (K=3.26mmol/L).” (P4)

8. The authors mention that computed tomography show infection in her sacral: what are these features of infection?
   - We addressed it on page 4.
   “Hip computer tomographic scan on her admission to other hospital showed a lesion with rarefaction areas in her sacral and obvious gas shadow on left buttock manifested infection of soft tissue at left hip and ischium on July 22, 2014.” (P4)

9. There are so many typographical or grammatical errors in the manuscript for instance –the wound on the medical aspect of the…
   - We have corrected typographical and grammatical errors. (See manuscript-tracked changes-colored)

10. The basis of irrigation with hydrogen peroxide, 0.9% saline, iodine, 0.5% metronidazole in turn is not clear.
    - We reorganized this sentence on page 4.
    To clean the wound with widely undermined areas, we put a sterile silicone tube (irrigating tube with diameter 6mm) deep into the tunnels and then applied them with 3% hydrogen peroxide, iodine, 0.5% metronidazole, 0.9% sodium chloride solution one after another from a 50ml syringe. (P4)

11. In the discussion-the statement that no statistically difference between type of irrigation solution. The use of statistic is poorly understood.
    - In fact, we did not use any statistic test in the article. We just referred to other author’s statements.
    “The irrigating solution has several alternatives. Matiasek J (4) reported a case study that combined NPWT with instillation using an octenidine based wound rinsing solution. In this study, NPWT was combined with a povidone iodine based wound irrigating solution. While Moore ZE (5) concluded that there was no good trial evidence to support use of any particular wound cleansing solution or technique for pressure ulcers. Normal saline is favored as it is an isotonic solution and does not interfere with the normal healing process.” (P7)

MINOR COMMENTS

12. Reference needs to be as index medicus and Vancouver style.
    - Done. (P8)

13. Not suitable for publication unless extensively edited.
    - Done. (See manuscript-tracked changes-colored)

14. The author used PU as abbreviation for Pressure Ulcer and Polyurethane?
    - We used PU as abbreviation for Polyurethane. (See page 8)
Additional comments

GENERAL POINTS
1. The authors present their experience in the use of negative pressure therapy in the complex wound complicating necrotizing fasciitis. The report is obviously novel as claimed by authors.

MAJOR COMMENTS
2. The abstract is not adequately representation of the case report.
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Abstract

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Conclusion NPWTi is a capable treatment protocol with excellent healing time, long-term functional and cosmetic outcomes on debilitated patients suffering severe complex pressure ulcers complicating necrotic fasciitis.

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