Letter to the Editor

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Response to Drew, R. (2020). Suspension Trauma: The silent killer. Canadian Journal of Emergency Nursing. https://doi.org/10.29173/cjen18

Dear CJEN editors,

We read 'Suspension Trauma. The silent killer by Richard Drew' on suspension trauma with concern. As the author points out there are areas of controversy and lack of knowledge. However, since many of the original papers and the influential Health and Safety Executive report by Sneddon in 2002 appeared, there have been new insights into the pathophysiology of suspension syndrome that do not support the original hypothesis of its origin (Rauch, 2019). We prefer the term 'syndrome' to describe the group of conditions seen when a subject hangs passively in a harness. This is not to say that trauma does not coexist in a subject who has fallen and been held on a rope. Indeed impact and deceleration trauma are well described in these situations. As early as 2006 there was a reigning back of the advice to place the casualty in the semi-recumbent position. For example, in *Casualty Care in Mountain Rescue*, (Ellerton, 2006, p. 320), the supine position was advocated for those patients in cardiac arrest. By 2008, after a further review of the literature, it was apparent that there was no evidence that placing the casualty in the (usual) supine position was associated with a poorer outcome. The authors went as far as to say that the semi-recumbent position may be harmful if internal trauma after a fall held by a rope had occurred (Thomassen, 2009).

In 2011, Mortimer wrote "Search and rescue teams and party members assisting a colleague suspended unconscious on rope should follow standard resuscitation measures to restore circulation to vital organs immediately" (Mortimer, 2011). Adisesh et al. (2011) and Pasquier et al. (2011) concurred with this assessment. The comprehensive European Resuscitation Council Guidelines for Resuscitation 2015 Section 4. Cardiac arrest in special circumstances do not mention suspension syndrome at all; other conditions causing cardiac arrest that require special consideration to standard ACLS are listed.

Not all authors have incorporated the new insights into their work. For example in 2014 on p. 265, the *Outdoor and Mountain Medicine* book published by the Club Alpina Suisse strongly condemns laying the person flat or in the recovery position for 10–20 minutes following rescue (Brunello et al., 2014, p. 265).

We and others feel there is a convergence of opinion amongst researchers and rescuers in the field (Weber, 2020). The key practical points are:

1. that suspension syndrome should be managed with a high degree of urgency. A safe extrication from the hanging position should be effected as soon as possible as a rapid deterioration in a patient's condition can occur in an unpredictable fashion and be fatal.
2. We feel that all casualties should be placed in a supine position once released and managed in line with standard ATLS/ACLS .

Further details of the ICAR MedCom recommendations can be found on our website (http://www.icar-med.com).

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Author's response

Thank you for your letter to the editor.

The intent of this article, "Suspension Trauma—The silent killer" was to bring awareness to a condition that is often not seen or recognized in the medical community. It serves as an understanding of how suspension can occur and brings awareness to how critically compromised a suspension victim could be.

This article, like many others, is seemingly unified with the approach to these victims sharing similar salient features about producing a timely rescue, including that their condition should be approached with a high degree of urgency.

The article, "Suspension Trauma," did take a more cautious approach when providing post-rescue treatment. It recommended that rescued suspension trauma patients who have been vertically suspended for greater than 30 minutes would be kept in a semi-fowlers position for no longer than 30 minutes, at which time lowering the head-of-bed position into a gradual supine position would minimize any further complications. However, this approach did also provide cautionary details and recommendations for those victims—that if at any time they had compromised airway, breathing or circulation, the rescuer may need to lower their head to provide advanced care. This beneficent approach does allow lateral movement for the rescuer when treatment decisions are being balanced to other life-saving measures.

The term of "suspension syndrome" may also be a consideration when identifying these particular victims. This article, "Suspension Trauma," had no biases to the name, but rather chose the name that was commonly used and referenced. In fact, the article did give considerations to other names identifying it in general terms as "orthostatic incompetence." I do appreciate your position and would agree that "syndrome" could be included into the vernacular when describing this particular injured population.

I do thank you for sharing your thoughts and referenced literature as this will certainly help further the discourse with this subject matter.

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