Work Instruction

Management of Paediatric Patients with Near Hanging or Strangulation

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Author/custodian	Director, Paediatric Emergency Medicine			**Review date**	21/02/2026
Supersedes	1.0				
Applicable to	Medical and nursing staff caring for patients who have had a near-hanging or strangulation event.				
Authorisation	Executive Director of Clinical Services				

Purpose

This document is to ensure the safe and effective assessment and management of patients who have had a near hanging or strangulation event.

Scope

This work instruction applies to medical and nursing staff looking after patients who have had a near hanging or strangulation event.

Background

Hanging can be defined as suspension by the neck resulting in asphyxia and death. Hanging is considered to be a sub-group of strangulation injuries. For the purposes of this guideline, we will use the term hanging to imply compression of the neck by any external means that results in compression of vasculature and airway.

Near hanging, by contrast, refers to survival following a hanging incident. This can still result in potentially devastating injuries which may progress to death, or serious long-term morbidity. The exact incidence of near hanging in paediatric populations is unknown, but older studies suggest they comprise 0.3%–0.7% of paediatric intensive care unit admissions.

In comparison to adults who present post a near hanging event, there is less risk of laryngeal and cervical vertebral injury in children. This is thought to be due to the relative elasticity of these structures in childhood. However, children are more likely to develop consequences of laryngeal oedema and subsequent airway obstruction due to the relatively narrow calibre of the paediatric airway.

There is a paucity of research into emergent management of these patients due to the infrequent rate of presentation and high pre-hospital mortality in this group. All patients presenting following a near-hanging event require careful assessment and discussion with a senior clinician.

Epidemiology

Near-hanging events can represent intentional suicide attempts and/or non-suicidal self-injury. It can also be the result of an accidental injury secondary to entanglement in everyday items including teething necklaces and cord blinds.
Another trend that appears to be emerging is paediatric patients presenting to ED following 'choking games.' While the majority of patients lose consciousness prior to serious injury occurring, this is not always the case particularly if a ligature has been used.

Public health measures have been undertaken to address accidental injuries in younger children (such as national cord blind safety requirements active since 2010), however as advocates for child health, we should remind parents at appropriate opportunities about the dangers of unsecured blinds, teething jewellery, choking hazards around the sleeping area/cots and any emerging online trends.

Goals of Management

During the initial assessment, should there be any haemodynamic or neurological concerns, management should be as per APLS or local resuscitation guidelines.

The below work instruction will assist decision making regarding subsequent management and investigation decisions.

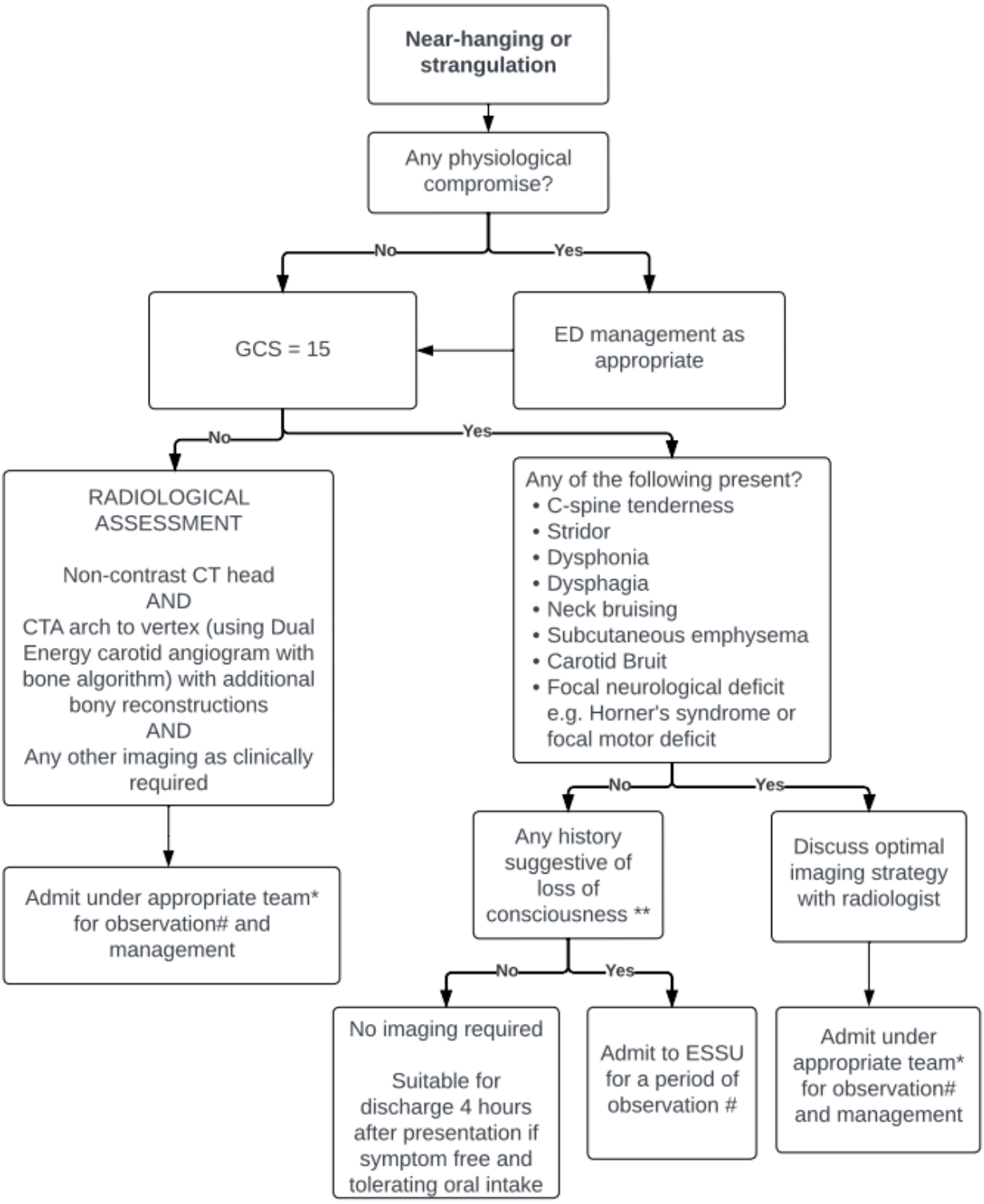
Retain a high index of suspicion for cervical spine injury. If any doubt, seek senior clinician support to assist in assessment.

Following medical assessment and clearance, if the patient remains in ED, the ED team will refer all patients with near-hanging secondary to suspected self-harm to Acute Response Team (ART) for assessment in ED.

In the case of a patient requiring an in-patient admission for further management or observation prior to medical clearance, the admitting team is responsible for referring the patient to the inpatient psychiatry liaison services.

To mitigate the risk of absconding, a nurse special or member of security should be considered for patients who have presented in with near-hanging that is secondary to suspected self-harm.

Instruction



* Appropriate team may be ED ESSU, PICU or a non CYMHS in-patient team

** In the setting of an LOC, a senior ED clinician may also elect to follow the imaging route if there is a high degree of clinical concern

The duration of observation is at the discretion of the senior ED clinician.

Consultation

Key stakeholders who reviewed this version:

- Paediatric ED SMO
- Paediatric Radiology SMO
- Child Psychiatry SMO

References and Suggested Reading

1. Hackett AM, Kitsko DJ. Evaluation and management of pediatric near-hanging injury. Int J Pediatr Otorhinolaryngol. 2013 Nov;77(11):1899-901. doi: 10.1016/j.ijporl.2013.09.003. Epub 2013 Sep 13. PMID: 24094721.
2. Kline-Fath BM, Seman JM, Zhang B, Care MM. Pediatric hanging and strangulation: is vascular injury a true risk? Pediatr Radiol. 2021 Sep;51(10):1889-1894. doi: 10.1007/s00247-021-05056-1. Epub 2021 Mar 30. PMID: 33783577.
3. Paul SP, Paul R, Heaton PA. Accidental hanging injuries in children: recognition and management. Br J Hosp Med (Lond). 2017 Oct 2;78(10):572-577. doi: 10.12968/hmed.2017.78.10.572. PMID: 29019723.
4. van Hasselt TJ, Hartshorn S. Hanging and near hanging in children: injury patterns and a clinical approach to early management. Arch Dis Child Educ Pract Ed. 2019 Apr;104(2):84-87. doi: 10.1136/archdischild-2018-314773. Epub 2018 Jul 9. PMID: 29987157.
5. https://www.productsafety.gov.au/product-safety-laws/safety-standards-bans/mandatory-standards/blinds-curtains-and-window-fittings

Audit/evaluation strategy

Level of risk	Medium
Strategy	Review of incident reports relating hanging/strangulation
Audit/review tool(s) attached	N/A
Audit/Review date	Yearly
Review responsibility	Emergency
Key elements / Indicators / Outcomes	N/A

Work Instruction revision and approval history

Version No.	Modified by	Amendments authorised by	Approved by
1.0 14/06/2018	Director Paediatric Emergency Medicine	Divisional Director, Critical Care	Executive Director Hospital Services
2.0 16/02/2023	ED SMO	Deputy Director Paediatric Emergency Medicine	Executive Director Clinical Services

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