CTA Use in Non-Fatal Strangulation (NFS) at the RBWH Emergency Department

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BACKGROUND
Non-fatal strangulation (NFS) poses a 7-fold risk of subsequent death in domestic and family violence situations. CT angiogram (CTA) of the neck is considered the gold standard for identifying life-threatening injuries in NFS patients, although in Australia there are no validated decision-making tools or guidelines to identify which patients should be imaged for injury. The aim of this audit was to review presentations of NFS to the Emergency Department and the features of patients for whom CTA was ordered, and those for whom it was not.

METHOD
- Retrospective cohort study of 126 NFS presentations from 1/1-31/12/2019
- RBWH Radiology Department collated data for all CT head and neck angiograms performed in 2019
- CT order requests were screened and excluded for cases other than NFS (e.g. Trauma, Code Stroke)
- EDIS search performed, identifying triage notes including key words ‘Strangulation/Asphyxia/DV/Sexual Assault/Hanging’
- Triage notes were screened and cases noting strangulation/domestic violence included
- Data extracted: demographics, clinical features/injuries, investigations, disposition, representation
- Presentations were retrospectively applied to US Training Institute on Strangulation Prevention imaging decision tool

RESULTS

PATIENT DEMOGRAPHICS

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<tbody>
<tr>
<td><strong>Age (median)</strong></td>
<td>29</td>
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<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>108 (86%)</td>
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<tr>
<td>Male</td>
<td>18 (14%)</td>
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<td><strong>Time since injury</strong></td>
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<td>Within 24 hours</td>
<td>71 (56%)</td>
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<td>&gt;3 days</td>
<td>18 (14%)</td>
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FINDINGS
- Comparison with US decision tool for imaging in NFS:
  - 93.5% had imaging appropriately ordered
  - 68% who did not have imaging ordered met criteria for imaging
- Outcomes:
  - Zero (0) patients had vascular injury on imaging
  - 3 patients were found to have other injuries, which were managed with outpatient care
  - Zero (0) patients were admitted
  - 8 patients represented within 1 month

FUTURE WORK
- Standardisation of criteria for imaging
- Improvement in documentation, particularly given the use of medical notes in legal proceedings