Lessons learnt from the VASM Audit

Peer review assessment

Mr Philip McCahy
Victorian Audit of Surgical Mortality (VASM)
Wednesday, 19th October 2018
Royal Children’s Hospital
VASM Audit Flow

### Notification
- ASM receives notification of death
- Surgical case form sent to Fellow for completion

### Reflection
- Completed surgical case form returned to ASM and de-identified

### Assessment
- Case form sent for FLA
  - SLA required?
    - Yes
    - SLA
    - No
  - Feedback to Fellow
    - Appeal lodged?
      - No
      - Case closed
First Line Surgical Assessor’s Form

1. Was there enough information to come to a conclusion?
   - Yes
   - No
   If no, what information was missing?

2. Should this case progress for case note review?
   - Yes
   - No
   If yes, which aspects of the case should be looked at in more detail?

3. If no operation was performed:
   - Should an operation have been performed?
     - Yes
     - No
     - N/A
   If yes, what operation and why?

4. Assessor’s view (before any surgery) of overall risk of death
   - Minimal
   - Small
   - Moderate
   - Considerable
   - Expected

5. Was this patient treated in a critical care unit during this admission?
   - Yes (go to q6)
   - No (continue)
   Should this patient have been provided critical care in:
   - Intensive Care Unit (ICU)
     - Yes
     - No
   - High Dependency Unit (HDU)
     - Yes
     - No

6. Was the decision on the use of DVT prophylaxis appropriate?
   - Yes
   - No
   - Don’t know

7. Was fluid balance an issue in this case?
   - Yes
   - No
   - Don’t know

GUIDELINES FOR COMPLETION OF VASM FIRST LINE ASSESSMENT FORM

VASM SLA referral

Do you consider management could have been improved in the following areas?

- Pre-operative management/preparation
- Intra-operative/technical management of surgery
- Decision to operate at all
- Grade/speciality of surgeon deciding
- Choice of operation
- Grade/speciality of surgeon operating
- Timing of operation
  - Too late, too soon, wrong time of day
- Post-operative care

An area for CONSIDERATION is where the clinician believes areas of care COULD have been IMPROVED or DIFFERENT, but recognise that it may be an area of debate.
An area of CONCERN is where the clinician believes that areas of care SHOULD have been dealt with differently.

ADVERSE EVENT is an unintended injury caused by medical management rather than by disease process, which is sufficiently serious to lead to prolonged hospitalisation or to temporary or permanent impairment of disability of the patient at the time of discharge, or which contributes to or causes death.

Were there any areas for CONSIDERATION, CONCERN or ADVERSE EVENTS in the management of this patient?

Yes (describe below)

No

Important: Please describe the 3 most significant events and list any other events

1. (Please describe the most significant event)
   
   Area of:
   - Consideration
   - Concern
   - Adverse Event
   
   Which:
   - Made no difference to outcome
   - May have contributed to death
   - Caused death of patient who would otherwise be expected to survive

   Was it preventable?
   - Definitely
   - Probably
   - Probably not
   - Definitely not

   Associated with?
   - Audited surgical team
   - Another clinical team
   - Hospital
   - Other (specify)

2. (Please describe the second most significant event)
   
   Area of:
   - Consideration
   - Concern
   - Adverse Event
   
   Which:
   - Made no difference to outcome
   - May have contributed to death
   - Caused death of patient who would otherwise be expected to survive

   Was it preventable?
   - Definitely
   - Probably
   - Probably not
   - Definitely not

   Associated with?
   - Audited surgical team
   - Another clinical team
   - Hospital
   - Other (specify)
Guidelines for First-Line and Second-Line Assessors
Management issues classification

• An area for **CONSIDERATION** is where the clinician believes areas of care COULD have been IMPROVED or DIFFERENT, but recognizes that it may be an area of debate,

• An area of **CONCERN** is where the clinician believes that areas of care SHOULD have been better, and

• An **ADVERSE EVENT** is an unintended injury caused by medical management rather than by disease process, which is sufficiently serious to lead to prolonged hospitalization or to temporary or permanent impairment or disability of the patient at the time of discharge, or which contributes to or causes death.
Automatic inclusion as adverse event:

- Anastomotic leaks
- Aspiration pneumonia
- Falls in hospital resulting in significant morbidity or mortality.
- Iatrogenic perforation of a viscus
- Post operative hemorrhage
- Pulmonary embolus
- Wound dehiscence
Principles of a SLA

- Summarise history and course of treatment,
- Comment on quality of record keeping,
- Provide constructive comments on how the outcome might have been improved, specifically responding to the FLA comments and ‘ACONS’, and
- Suggest changes in future practice.
Substandard SLA report

This case is an unfortunate situation. I feel strongly that children with syndromes with conditions affecting the head and neck regions should be in a HDU care for the first post-op night, where special care is available, and if stable overnight to be transferred to a paediatric ward. This ward will have care and experience of nurses who can monitor intake, fluid balance and pain care; also to make sure that these kids are replicating what their conditions are when discharged to their home situations.

I believe the adenotonsillectomies were done competently, however I am not privy to whether the indication was absolute or relative.

The most likely cause of his brain hypoxia is most likely aspiration, but we will never know without a post-mortem report.

I wish calm and strength to all concerned.
Inappropriate SLA report

“The case demonstrates an appalling lack of judgement by the treating surgical team”

“It was poor judgement in the extreme to subject this patient to such a large operation that was obviously unnecessary, and in no way could this be considered a justified procedure. As such, the recommendation in this case is that the case be referred to the hospital medical director for further investigation, and/or referral to AHPRA”
Comments from SLA report

“significant concerns for the medico-legal culture of the involved hospital”

“difficulties obtaining IV access, ....... CT scan, ....... inpatient bed, .......
Obtaining assistance in resolving these issues. This suggests a hospital under stress”
Comments from SLA report

“anterior ..... operations were ill-conceived and likely to fail and should never have been done....... One wonders whether the surgeon had undertaken the appropriate level of training for such major and extensive ..... surgery....... If the patient had been managed in a decisive fashion with carefully managed analgesia, mobilization in an appropriate brace, and ..... rehabilitation, she would not have died.”
Gold standard SLA report

Clinical details:
Diagnosis: Type A aortic dissection.
Operations: Type A aortic dissection repair, thoracotomy and clip intercostal artery.
Cause of death: Exsanguination causing hypoxic brain damage.

Course to death:
Pleural effusion causing breathlessness and oxygen requirement in the postoperative period after Dacron graft repair of a type A dissection. An ICC was inserted on the ward at 6:30 pm on day 7 for drainage of a pleural effusion. Initially good drainage of the pleural effusion was seen on CXR at 6.55 pm; however, the patient developed massive haemorrhage from a lacerated intercostal artery at 8.30 pm while in ED radiology (seen on CXR). Haemorrhagic shock developed and the patient went into cardiac arrest. They were resuscitated with cardiopulmonary resuscitation for 1 minute, blood products and adrenaline were used in the ED. The patient was transferred to the operating theatre for thoracotomy to repair the bleeding intercostal artery. As a consequence of the bleeding, low blood pressure and cardiac arrest, the patient sustained a severe (hypoxic ischaemic) brain injury that was nonsurvivable. There was no significant past medical history prior to the type A aortic dissection.

The patient received 80 mg of enoxaparin at 2:00 pm on day 7 post-surgery for suspected pulmonary embolus, which was ruled out on subsequent computed tomography (CT) scanning of the chest. Initial surgery for type A aortic dissection proceeded smoothly, with very good progress post-surgery. The patient was almost ready to go home when the above event occurred. ICC insertion was performed by a resident under registrar supervision without any prior discussion with the consultant...

In summary, death in this case was preventable and the issues were:
• decision to drain the effusions
• decision to insert an ICC in an anticoagulated patient
• poor clinical assessment of a patient experiencing a major complication (haemothorax and incipient haemorrhagic shock)
• failure of communication with the consultant surgeon.

The hospital had excellent documentation and the openness with which they conducted their dialogue with the patient's family was exemplary. The patient was in the operating theatre within a couple of hours of confirmation of the diagnosis, survived the surgery despite the usual complication of postoperative coagulopathy, woke without neurological deficit and was able to be extubated within 24 hours. The issue in this case revolves around the decision making regarding the treatment of a postoperative pleural effusion and the communication with the consultant surgeon.

At 6:30 pm on day 7 for drainage of a pleural effusion, initially good drainage of the pleural effusion was seen on CXR at 6.55 pm; however, the patient developed massive haemorrhage from a lacerated intercostal artery at 8.30 pm while in ED radiology (seen on CXR). Haemorrhagic shock developed and the patient went into cardiac arrest. They were resuscitated with cardiopulmonary resuscitation for 1 minute, blood products and adrenaline were used in the ED. The patient was transferred to the operating theatre for thoracotomy to repair the bleeding intercostal artery. As a consequence of the bleeding, low blood pressure and cardiac arrest, the patient sustained a severe (hypoxic ischaemic) brain injury that was nonsurvivable. There was no significant past medical history prior to the type A aortic dissection.

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Surgical lessons:
Communication is one of the nine RACS competencies that all surgeons and trainees should be familiar with. Good communication is essential across all levels of surgical care to ensure the delivery of the highest standards of care to patients. Failure to communicate can often lead to poor outcomes.

Reference:
Concordance

<table>
<thead>
<tr>
<th>Year</th>
<th>Surgeon and first-line assessor</th>
<th>First-line assessor and second-line assessor</th>
<th>Surgeon and second-line assessor</th>
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<tbody>
<tr>
<td>2011-2012</td>
<td>77.0%</td>
<td>72.0%</td>
<td>58.0%</td>
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<tr>
<td>2012-2013</td>
<td>77.7%</td>
<td>70.4%</td>
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<tr>
<td>2013-2014</td>
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<td>58.1%</td>
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<td>2014-2015</td>
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<td>57.1%</td>
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<tr>
<td>2015-2016</td>
<td>78.6%</td>
<td>71.1%</td>
<td>56.8%</td>
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</table>
The peer-review assessment was informative. The peer-review assessment was fair. The peer-review feedback is a good source of information to improve surgical care at my institution.

Agreement level:
- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
Surgeons comments

• The feedback has been taken on board and will influence future management,
• I agree the assessment was entirely fair. I cannot disagree when it validates my practice! If there are deficiencies in care in a case it is much more educational. We learn through our mistakes,
• The decisions were a shared process and responsibility between the cardiologist, anaesthetist, intensivist and myself as surgeon. I agree that the decision was taken too late, and the process of decision making although democratic was overly complex,
• I concur with the assessor’s review and certainly on reviewing the case soon after the event I had already considered all the points mentioned. A very fair and useful assessment, and
• In this case, although I and other treating clinicians felt that there was more that we could do, the patient elected to limit treatment after the superficial haematoma wound washout (secondary to hip replacement). The patient's family supported the decision.
Conclusions

• High levels of concordance percentages were observed,
• The first-line assessors are reliant on the treating surgeon’s account of the case, and
• The second-line assessors have access to the full medical record.
Future directions

• Enhance current processes and collaboration with SCV,
• Update Assessment Guidelines,
• Increase educational activities,
• Improve patient care and surgical experience, and
• Monitor the audit quality loop.