The Faculty of Intensive Care Medicine

Safety Incidents in Critical Care

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Introduction

Through a data sharing agreement, the Faculty of Intensive Care Medicine can access a record of incidents reported to the National Reporting and Learning System (NRLS). Available information is limited and from a single source; all that we know about these incidents is presented in this report. The safety bulletin aims to highlight incidents that are rare or important, and those where the risk is perhaps something we just accept in our usual practice. It is hoped that the reader will approach these incidents by asking whether they could occur in their own practice or on their unit. If so, is there anything that can be done to reduce the risk?

Case 1 | Central Line Misplacement

A ventilated patient had a central line inserted for administration of a vasopressor. The CVP was transduced throughout, with recorded pressures of >50mmHg. After finding unequal pupils, the patient was transferred for an urgent CT head which showed multiple and widespread acute infarcts. The incident report notes that, at this time, the scale was optimised and an arterial trace was seen. Blood gas from the line confirmed arterial blood.

Comment

In a previous bulletin we reported on the use of CXR to identify arterial placement of an intended venous line. This incident relates to an issue with pressure transducing. Learning points from this case are that:

- A high CVP indicates an issue. The issue may be with the line, the patient or the transducer but a cause should always be sought.
- Available waveforms should always be visible with the scale optimised.

We recommend that units agree a standard operating procedure for confirmation and documentation of correct line placement and suggest that a second, confirmatory check is also used.

Cases 2 and 3 | Missing Vital Information

The paper notes for a patient on the ICU were reported to be unfiled and potentially incomplete. A limitation of escalation decision was missed and the patient was receiving treatment that had been determined to not be in their best interests. Verbal handovers had also omitted this information.

A patient was not resuscitated when in cardiac arrest because of an incorrectly held belief that a DNACPR order was in place.

Comment

Errors and omissions can easily be carried forward with repeated handover. With vital information such as treatment limitation, known difficult intubation, allergies etc., best practice is to ensure it is prominently displayed (either in the environment or medical record as appropriate) and to also confirm that the information is known and correct at regular intervals (e.g. as part of a ward round checklists).

Cases 4 | Can a risk be avoided?

A patient receiving a loading dose of Milrinone received an accidental overdose.

Comment

The reason to highlight this case is that everything we do carries risk, and one way to avoid that risk (but also to avoid any benefit) is not to do it.

We are making no recommendation whatsoever around whether a loading dose of Milronone should be given, but it is an area where practice variation exists. The BNF recommends a loading dose, however this small study concludes that avoidance may improve the safety profile.

Case 5 | Vasopressors Outside the ICU

A patient in a general ward was administered a peripheral infusion of Metaraminol whilst waiting for an ICU bed to become available. The infusion completed and was not renewed. The ICU were contacted because of a precipitous drop in the patient's blood pressure. Before another infusion could be prepared the patient suffered a cardiac arrest.

Comment

This case highlights several points. Firstly, if a critical infusion is started it is the responsibility of the prescriber to ensure that those caring for the patient are aware of its importance and familiar with its use. The prescription must also highlight the critical nature of the drug.

More fundamentally however, a patient receiving critical care interventions whilst awaiting a bed in the ICU is at risk. All efforts must be made to expedite admission, whilst ensuring the patient is receiving appropriate observation and care, delivered by a competent individual.

Case 6 | Mediastinal Drains

A mediastinal drain was removed by a cardiac surgeon post-operatively. A CXR later confirmed that part of the drain had been retained, requiring a return to theatre for removal. The drain was found to be trapped between the sternal edges, which is a rare but recognised complication. The reporter highlighted that supply issues had resulted in the use of rigid thoracic chest tubes for mediastinal drainage rather than drains designed for that purpose.

Comment

Depending on the manufacturer instructions, this may have been an 'off label' use of a chest tube. The MRHA have released useful guidance for the off label use of devices, acknowledging however that on occasion there is no other option.

Case 7 | Failure to Recognise

Two members of staff were applying a non-invasive ventilation mask. The ventilator was sounding an alarm but this was not acknowledged.

A third staff member (who attended after hearing the alarm) noted that the arterial line trace was absent and that there was no saturations trace on the monitor. Their next action was to silence the ventilator alarm, noting at this time that the ventilator was in an apnoea ventilation mode.

The alarm was reset, but the ventilator again returned to apnoea ventilation. At this point the staff member realised the patient was not making any respiratory effort. A patient assessment revealed that the patient was in cardiac arrest.

Comment

When written and with hindsight, the reality of this situation is clear. Why therefore did the cardiac arrest take so long to recognise? The answer must be cognitive bias; task fixation, alarm fatigue, denial etc. We are all susceptible, and what we can do to reduce our biased decision making is an interesting area of debate and research.

Safety News

The UK Health Security Agency have issued guidance concerning Hepatitis B and dialysis to prevent cross-infection.

A patient safety alert has highlighted the risk of potent synthetic opioids (nitazenes). A review article describing the new synthetic opioids can be found here.

Finally, the MRHA have issued advice on the risk of myasthenia gravis being (very rarely) triggered or aggravated by statin therapy.

We also invite you to submit anonymous summaries of incidents or near misses that have lessons that we can learn from. If you wish to do so, please get in touch via **contact@ficm.ac.uk.**