Postoperative care following bowel surgery
17HDC00679, 26 July 2019

District health board ~ Respiratory distress ~ Nasogastric tube ~ Aspiration ~Ventilation policy ~ Right 4(1)

A 65-year-old woman was admitted to a public hospital for ultra low anterior resection and loop ileostomy surgery. The next day it was reported that she was recovering well, but by the afternoon she started to show signs of postoperative ileus and had a high white cell count (WCC), which persisted throughout her admission. There is no clinical record that infection was considered as a cause of the elevated WCC.

The following day, the woman experienced vomiting, nausea, and abdominal distension. Staff attempted to insert a nasogastric tube (NGT) on two occasions that evening but were unsuccessful. Subsequently she had a large vomit and became distressed at the prospect of further attempts to insert an NGT.

The next evening it was noted that the woman's abdomen remained distended and that she refused to have an NGT inserted. However, there is no record that the significance of NGT insertion was discussed with her at this time.

The following morning, at 9.30am, a surgical registrar reviewed the woman following deterioration in her condition that morning. The registrar made a working diagnosis of respiratory distress secondary to pneumonia, and planned for immediate transfer to the intensive care unit (ICU).

The registrar discussed the woman's case with ICU staff, and at 9.55am she was transferred to ICU. There is no documentation in relation to the handover to ICU at this time. Following assessment, the woman was treated with high flow nasal prongs, and the plan was to escalate to bilevel positive airway pressure (BiPAP) if the nasal prongs proved insufficient. There is no record that NGT insertion was considered at this time.

At 11.20am, the woman's SpO_2 reduced to 90%, and at 11.45am a decision was made to commence BiPAP treatment. Her condition did not improve on BiPAP, and it is recorded that she had vomited and was hypotensive. At 2.20pm, the registrar and the on-call anaesthetist were called. The registrar inserted an NGT and suctioned out over three litres of dark green gastric fluid. It was noted that the woman may have suffered an aspiration during intubation. BiPAP treatment was stopped, and at 2.30pm mechanical ventilation was commenced.

Subsequently, the woman required CPR for non-recordable cardiac output. Attempts to resuscitate her failed, and she died at 4.33pm. A post mortem noted the cause of death as pneumonia due to aspiration.

Findings

The district health board was found to have breached Right 4(1) for the following reasons:

- There was a lack of timely investigation of whether infection was the cause of the persistently elevated WCC.
- There is no record that staff discussed the importance of NGT insertion with the woman prior to her refusal of intubation.

- It appears that NGT insertion was not considered despite persistent ileus and acute respiratory deterioration.
- There was inadequate documentation regarding handover from the ward to ICU staff.
- In ICU, an NGT was not inserted prior to treatment with BiPAP, the on-call anaesthetist should have been called sooner, and invasive ventilation was implemented too late.

Recommendations

It was recommended that the district health board provide a written apology to the family and provide evidence that its “Non-invasive ventilation policy” has been implemented.