MAGISTRATES COURT
TASMANIA

MAGISTRATES COURT *of* TASMANIA

CORONIAL DIVISION

Record of Investigation into Death (Without Inquest)

Coroners Act 1995
Coroners Rules 2006
Rule 11

I, Olivia McTaggart, Coroner, having investigated the death of Warren James Newell

Find, pursuant to Section 28(1) of the *Coroners Act* 1995, that

a) The identity of the deceased is Warren James Newell, date of birth 22 May 1951.

b) Mr Newell was 71 years of age and lived in Port Sorell with his wife. He worked as a geotechnical engineer and was highly regarded in his field. Mr Newell was being actively treated for oesophageal cancer, for which he had undergone surgery in 2021. His last chemotherapy treatment before his death occurred on 26 September 2022. On 27 September 2022 Mr Newell attended the Mersey Community Hospital (MCH) to have his PICC (percutaneously inserted central catheter) line removed due to left arm deep vein thrombosis. On that date he was commenced on rivaroxaban (an oral anticoagulant) and chemotherapy was ceased.

On 29 September 2022 Mr Newell attended the MCH complaining of experiencing left-sided chest pain at home together with light-headedness and pain radiating to the left arm and neck. An ECG in hospital indicated a diagnosis of acute coronary syndrome. On that date, the rivaroxaban was ceased and aspirin and clopidigrel were commenced together with enoxaparin (100 mg twice daily). Mr Newell's case was discussed with the cardiology team at the Launceston General Hospital (LGH), and he was advised for inpatient workup at MCH and then for transfer to LGH if there were new ECG changes. Mr Newell was admitted to the Close Observation Unit in the MCH with four hourly clinical observations. The plan was to wait for inpatient transfer for coronary angiogram at the Percutaneous Coronary Intervention Centre at the LGH.

On 30 September 2022 Mr Newell's condition was stable. His vital signs were normal, his lungs were clear and his heart sounded normal. The ECG changes had not advanced. His troponin blood level did not indicate heart damage.

The following day, 1 October 2022, Mr Newell's condition remained stable until 4.00pm. At that time, Mr Newell became confused, disoriented and was trying to climb out of bed. His consciousness was reduced, with his Glasgow Coma Score (GCS) falling to 11/15. His blood pressure had increased significantly and his heart rate had dropped. An urgent CT scan of his brain showed a large left frontal-temporal-parietal subdural haemorrhage with compression of his left lateral ventricle and midline shift to the right.

Mr Newell was urgently transferred to the Emergency Department (ED). In the ED his GCS fell to 4-5/15. The neurosurgery unit at the Royal Hobart Hospital was contacted and reviewed the radiology but considered that Mr Newell's intracranial haemorrhage was inoperable and unsurvivable. Palliative care was commenced, and Mr Newell died in the evening of 1 October 2022.

c) Mr Newell's cause of death was raised intracranial pressure caused by a left frontal-temporal-parietal subdural haemorrhage. The subdural haemorrhage, in turn, was caused by coagulopathy due to his administered medications – being a supra-therapeutic dose of enoxaparin, previous oral anticoagulation (rivaroxaban) for thromboembolism, and dual antiplatelet agents (aspirin and clopidogrel). Mr Newell's death was not related to ischaemic heart disease, pulmonary thromboembolism or adenocarcinoma of the oesophagus.

d) Mr Newell died on 1 October 2022 at Latrobe, Tasmania.

In making the above findings, I have had regard to the evidence gained in the comprehensive investigation into Mr Warren James Newell's death. The evidence includes:

- The Police Report of Death for the Coroner;
- Tasmanian Health Service Death Report to Coroner;
- Affidavits verifying identity;
- Hospital records for Mr Newell;
- General practitioner records for Mr Newell;
- Affidavit of Paul Newell, son of Mr Newell;
- Independent medical review by Dr Anthony Bell, coronial medical consultant;
- Tasmanian Health Service Final RCA Report; and
- Correspondence from the Executive Director Medical Services Hospitals North West regarding implementation of RCA recommendations.

Comments and Recommendations

In this case, I have had particular regard to the affidavit of Mr Newell's son, Paul Newell, expressing concerns relating to his father's treatment in hospital leading to his death. I have also had regard to the Tasmanian Health Service RCA report and the independent medical review by Dr Anthony Bell.

Mr Paul Newell raised several concerns about aspects of Mr Newell's treatment. With one exception, both Dr Bell and the RCA panel considered that there was appropriate diagnosis, specialist consultation and treatment of Mr Newell at the MCH. I agree with their analysis and do not consider that, apart from one matter, the issues raised by Mr Paul Newell have merit.

The significant deficiency in treating Mr Newell was the administration to him of an excessive dose of enoxaparin (100mg) on four occasions over two days before his subdural haemorrhage.

Dr Bell reported that intracranial haemorrhage (including subdural haemorrhage) is a potentially devastating occurrence associated with anticoagulant therapy. He stated that subdural haemorrhage is reported with enoxaparin but is rare and there are no available large studies.

To explain the issue with Mr Newell's enoxaparin treatment, Dr Bell stated in his report;

> "The patient had a NSTEACS (Non-ST Elevation Acute Coronary Syndrome) and was given standard therapeutic drugs. The LGH cardiology department was contacted. As the patient was stable, coronary artery angiography was planned. In the meantime, the patient was started on appropriate therapy with enoxaparin and dual antiplatelet therapy. There was no consideration of the patient's weight and there was no recorded weight or evidence the patient was questioned about weight. In the Launceston General Hospital record two months prior to the MCH admission the patient's weight was recorded as 78.9 kg. The doses that should have been prescribed was 80 mg twice daily by subcutaneous injection. The extra dosing would increase the chance of subdural haemorrhage but only by a small amount on top of a rare complication."

The RCA panel also considered the issue and noted that Mr Newell, in fact, weighed 70.1 kg. On that basis, the therapeutic enoxaparin dosing should have been 1 mg/kg twice daily,

resulting in Mr Newell being prescribed 70 mg twice daily instead of the excessive dose of 100 mg twice daily.[1]

Upon the evidence, it is difficult to determine the extent to which the excessive doses of enoxaparin contributed to Mr Newell's subdural haemorrhage. It is also difficult to determine whether he would have died of the same cause if the doses had been correct. There is no doubt that Mr Newell required the medication that he was given, despite the possible consequences. However, it is likely that the inappropriate and excessive dose of enoxaparin played a role in his haemorrhage and death.

The RCA panel noted that human error was the primary reason for the incorrect dose. However, other factors were identified as contributing - primarily, that Mr Newell was not weighed upon admission as he should have been and therefore his weight was not recorded on the medication chart as a prompt for weight-based medication doses.

The RCA report highlighted that an electronic prescribing system would have flagged the incorrect dose as it would prompt a weight for the medication and then identify that it was an excessive dose. Similarly, the RCA panel indicated that if there had been a pharmacist for the emergency department, the pharmacist's reconciliation would have flagged the excessive dose.

The RCA panel made various recommendations, including improved practices for recording a patient's weight, placing correct enoxaparin dosages in guidelines, implementation of an e-prescribing system, a pharmacist service for the emergency department and alleviation of workload in relevant circumstances.

I assume that these measures have now been substantially completed. Without making a formal recommendation, I comment that the Tasmanian Health Service and MCH should revisit the recommendations contained in the RCA and assess whether any further action should be taken to implement measures to enhance the accurate use of drugs.

[1] The panel indicated that a *once only* 100 mg dose of enoxaparin may have been suitable for Mr Newell if he had atrial fibrillation with normal renal function. However, this was not a suitable dose for the acute coronary syndrome suffered by Mr Newell.

I convey my sincere condolences to the family and loved ones of Mr Newell.

Dated: 30 September 2024 at Hobart in the State of Tasmania.

Olivia McTaggart
Coroner