IN THE CORONERS COURT

OF VICTORIA

AT MELBOURNE

Court Reference: COR 2017 5367

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)

*Section 67 of the **Coroners Act 2008***

Findings of:	Paresa Antoniadis Spanos, Coroner
Deceased:	Ms C*
Date of birth:	18 July 1968
Date of death:	21 October 2017
Cause of death:	Hypoxic ischaemic encephalopathy complicating cardiac arrest due to pulmonary thromboembolism in the setting of morbid obesity
Place of death:	Geelong, Victoria

* At the request of Ms C's family, this published finding had been de-identified.

I, PARESA ANTONIADIS SPANOS, Coroner,

having investigated the death of Ms C

without holding an inquest:

find that the identity of the deceased was Ms C

born on 18 July 1968

and that the death occurred on 21 October 2017

at University Hospital Geelong, Bellarine Street, Geelong, Victoria

from:

1 (a) HYPOXIC ISCHAEMIC ENCEPHALOPATHY COMPLICATING CARDIAC ARREST DUE TO PULMONARY THROMBOEMBOLISM IN THE SETTING OF MORBID OBESITY

Pursuant to section 67(1) of the *Coroners Act 2008*, I make findings with respect to the following circumstances:

Background

1. Ms C was a 49-year-old married woman and a mother of two. [redacted]

2. Ms C had post-traumatic stress disorder (PTSD) and experienced anxiety and depression on the background of childhood trauma. She was under regular review and had multiple hospital admissions under her regular psychiatrist due to exacerbations in her PTSD symptoms. Ms C also had a medical history of Graves disease, obstructive sleep apnoea (OSA), and morbid obesity for which she had gastric band surgery.

Circumstances immediately proximate to death

1. On 14 October 2017, Ms C was transported to University Hospital Geelong Emergency Department (ED) following deliberate ingestion of a significant quantity of prescription medication, namely propranolol, clonazepam, diazepam, and prazosin. She was sedated, intubated, and ventilated in the ED and subsequently transferred to

the Intensive Care Unit (ICU). Ms C was extubated on 15 October 2017 and transferred to the ward the following day.

2. Ms C had ongoing oxygen requirements which was attributed to chronic hypoxia and CO_2 retention in the setting of her OSA. She was weaned off oxygen in the following days. No calf swelling or tenderness was documented in the medical or nursing notes and Ms C received standard dosage heparin (5000 units) twice daily for venous thromboembolism prophylaxis.

3. While on the ward, Ms C and her husband both expressed concern and distress that she could not be nursed in a single room. Ms C repeatedly expressed a desire to be discharged or transferred to the care of her private psychiatrist. However, she was not considered to be medically fit for transfer to the facility where her psychiatrist would accept her as a patient, and no other private hospital was found which would accept the transfer.

4. At about 1.00pm on 18 October 2017, Ms C was discharged from University Hospital Geelong, following review by the general medicine consultant and the psychiatry team. She was scheduled for follow up review with her regular psychiatrist.

5. On the way home, Ms C became short of breath, had a brief episode of unconsciousness and developed chest pain. Ambulance Victoria transported Ms C back to the Geelong ED. A presumed diagnosis of pulmonary embolus (PE) was made in the ED. Ms C went into cardiac arrest and cardiopulmonary resuscitation was commenced.

6. Ms C was transferred to the ICU for initiation of extracorporeal membrane oxygenation. She received high dose thrombolysis to treat her PE. However, Ms C had already sustained serious brain injury and testing confirmed Ms C's brain death on 21 October 2017.

Medical cause of death

7. On 23 October 2017, senior forensic pathologist Dr Matthew Lynch of the Victorian Institute of Forensic Medicine (VIFM) reviewed the Victoria Police Report of Death, Form 83, medical records and E-Medical Deposition from University Hospital Geelong, a post mortem computed tomography scan (PCMT) and performed an external examination upon the body of Ms C.

8. Dr Lynch advised that PMCT revealed pseudo-subarachnoid haemorrhage, bilateral pleural effusions, increased lung markings and a right perinephric haematoma.

9. Dr Lynch formulated the medical cause of Ms C's death as *hypoxic ischaemic encephalopathy complicating cardiac arrest due to pulmonary thromboembolism in the setting of morbid obesity,* without need for autopsy.

Family concerns

10. In a letter dated 3 November 2017, Mr J, Ms C's husband, wrote to the court expressing concerns about the medical care provided to Ms C. In particular, he noted that his wife had complained of calf pain to him several times, and that he had subsequently communicated this to Barwon Health staff, but no action was taken.

Investigation into medical care

11. I asked the Health and Medical Investigations Team (HMIT), part of the Coroners Prevention Unit (CPU),[1] to review the circumstances of Ms C's death, particularly in light of her husband's recollection that complaints of calf pain had been ignored and to advise me on the adequacy of the clinical management and care provided to Ms C.

12. The HMIT reviewed the court file (including Mr J's letter of concerns), Barwon Health medical records and statements obtained from Barwon Health clinicians involved in Ms C's care, Nurse Unit Manager Kelly Lestrange, and General Medical Physician Dr Raquel Cowan.

13. Dr Cowan and Ms Lestrange noted that neither they, nor any medical or nursing staff recalled any mention of Ms C complaining of calf pain during her admission. They both went on to explain that calf pain would be considered a potentially significant complaint, which would warrant documentation in the notes. Further, Ms Lestrange noted that any complaint of leg pain would be expected to prompt nursing staff to request medical review. Dr Cowan noted such a complaint would be expected to result in a medical officer conducting a physical examination in the first instance. The

[1] The HMIT is part of the Coroner Prevention Unit (CPU), which was established in 2008 to strengthen the prevention role of the Coroner. The CPU assist the Coroner to formulate prevention recommendations and comments and monitors and evaluates their effectiveness once published. HMIT is staffed by practising physicians and nurses who are independent of the health professionals or institutions involved. They assist the Coroner's investigation of deaths occurring in a healthcare setting by evaluating the clinical management and care provided and identifying areas of improvement so that similar deaths may be avoided in the future.

clinical medical, nursing, and physiotherapy notes were reviewed and did not document any report of calf pain.

14. The HMIT concluded that the medical management of Ms C appeared reasonable and adequate. She received standard dose prophylaxis for venous thromboembolism. However, the HMIT commented that it is becoming increasingly recognised in medical literature that drug doses often require adjustment in obese patients. Morbidly obese patients are at high risk of VTE and standard (unadjusted) dosage likely results in suboptimal thromboprophylaxis.

15. Despite this, the HMIT advised that there is currently little evidence or guidance in the literature about how best to dose obese individuals. Dosage cannot be simply calculated on body weight (or body mass index) alone, as drug metabolism is also dependent on body composition. There is continued discussion in the medical literature regarding optimum prophylactic heparin dosage but there are no firm guidelines regarding increased dosage in obese patients.

Findings

16. I find that Ms C died at University Hospital Geelong on 21 October 2017 from hypoxic ischaemic encephalopathy complicating cardiac arrest due to pulmonary thromboembolism in the setting of morbid obesity.

Comment

Pursuant to section 67(3) of the ***Coroners Act 2008***, I make the following comment on a matter connected with the death:

1. The care provided to Ms C by Barwon Health was reasonable and appropriate by reference to current clinical guidelines. Whilst it is possible that a higher dose of heparin would have provided the optimum level of thromboprophylaxis, the evidence does not support a finding that there was any want of clinical care or management on the part Barwon Health staff that caused or contributed to Ms C's death.

2. That said, the HMIT/CPU advises that experience in the coronial jurisdiction is consistent with what is reported in the literature and indicates an increased risk of venous thromboembolism in obese patients

Recommendation

Pursuant to section 72(2) of the ***Coroners Act 2008***, I make the following recommendation on a matter connected with the death:

1. I recommend that the Australian Commission on Safety and Quality in Health Care which has published recommendations for venous thromboembolism, further evaluates if increased dosages should be considered in the obese population, and, if so, that a specific dosage for obese patients be included in the Therapeutic Guidelines.

I direct that a copy of this finding be provided to the following:

The Family of Ms C

Barwon Health

Office of the Chief Psychiatrist

Australian Commission on Safety and Quality in Health Care

Safer Care Victoria

Society of Hospital Pharmacists

Signature:

PARESA ANTONIADIS SPANOS

Coroner

Date: 29 October 2019