



MAGISTRATES COURT *of* TASMANIA

CORONIAL DIVISION

Record of Investigation into Death (Without Inquest)

*Coroners Act 1995
Coroners Rules 2006
Rule 11*

I, Simon Cooper, Coroner, having investigated the death of Helen Mary Badcock

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

- a) The identity of the deceased is Helen Mary Badcock;
- b) Mrs Badcock died as a result of suffering a type I aortic dissection (DeBakey Type I);
- c) The cause of Mrs Badcock's death was haemoperitoneum and retroperitoneal haematoma; and
- d) Mrs Badcock died on 26 December 2020 at 46 Dry Street, Deloraine, Tasmania.

Introduction

In making the above findings, I have had regard to the evidence gained in the investigation into Mrs Badcock's death. The evidence includes:

- The Police Report of Death for the Coroner;
- An opinion of the forensic pathologist who conducted the autopsy;
- Affidavits confirming identification and life extinct;
- Affidavit of Ms Kathryn King, Mrs Badcock's daughter;
- Medical Records – Tasmania Health Service (Launceston General Hospital);
- Records – Ambulance Tasmania;
- Medical Records – Deloraine Medical Centre; and
- A report from the Medical Advisor to the Coronial Division.

Mrs Badcock was born in Launceston, Tasmania on 29 January 1943. At the time of her death, she was aged 77 years and living in her own home at Deloraine, Tasmania.

On Christmas Day 2020, Mrs Badcock was at home with her daughter and granddaughter. She developed significant pain in her abdomen and numbness in her right leg. Her daughter called an ambulance. Ambulance paramedics attended and found Mrs Badcock appearing alert and not distressed. However, and significantly, the paramedics were unable to find a blood pressure on her right hand side. Blood pressure was able to be measured on her left side.

Mrs Badcock was transported to the Launceston General Hospital (LGH). In Ambulance Tasmania Records the paramedics have noted that the "LGH was unable to obtain BP on right side."

Mrs Badcock was reviewed at the LGH. The history of altered sensation in the right leg and foot were recorded with no history of trauma. A CT scan of her lumbar spine was ordered and carried out. The results of that scan showed degenerative spinal disease with very mild canal stenosis and some moderate narrowing at L3-4. Blood tests proved unremarkable, and Mrs Badcock was discharged, staff apparently concluding that her presentation was in some way attributable to the mild spinal degeneration indicated in the CT scan.

Unfortunately, this conclusion was not correct, as Mrs Badcock had suffered a type I aortic dissection. The fact that Mrs Badcock had suffered an aortic dissection should have been apparent because of the inability to obtain a blood pressure on her right side – something ambulance paramedics noticed and recorded, but staff at the Launceston General Hospital did not. Mrs Badcock was discharged home with painkillers, where she died from an aortic dissection in the evening of the following day.

A report reviewing her medical treatment by Dr Anthony J Bell MB BS MD FRACPM FCICM said:

"Aortic dissection is relatively uncommon, but it often presents acutely as a catastrophic illness with severe chest or back pain and acute hemodynamic compromise. Early and accurate diagnosis and treatment are crucial for survival. Hypertension is a major risk factor.

In an analysis of 250 patients with acute chest and/or back pain (128 with a dissection), 96 percent of acute aortic dissections could be identified based upon three clinical features (see appendix 1):

- *Abrupt onset of thoracic or abdominal pain with a sharp, tearing, and/or ripping character*

- A variation in pulse (absence of a proximal extremity or carotid pulse) and/or blood pressure (>20 mmHg difference between the right and left arm)
- Mediastinal and/or aortic widening on chest radiograph

The probability of a dissection related to the presence or absence of these three were:

● **Isolated pulse or blood pressure differential, or any combination of the three:**
≥83 percent

● Presence of mediastinal widening: 39 percent

● Pain alone: 31 percent

Acute medical management of acute aortic syndromes including aortic dissection involves controlling pain, and providing anti-impulse therapy in the form of blood pressure lowering and decreasing the velocity of left ventricular contraction, to decrease aortic shear stress and minimize the tendency for the dissection to propagate.

Determining the location of the aortic dissection and its etiology are important, as these impact management. Acute type A aortic dissection is a surgical emergency. Acute type B aortic dissection typically does not require urgent surgery unless the patient develops complications (eg, end-organ malperfusion, refractory pain, rapidly expanding false lumen, impending or frank rupture). Acute type A aortic dissection is a surgical emergency since these patients are at high risk for a life-threatening complication such as aortic regurgitation, cardiac tamponade, stroke, frank rupture, and myocardial infarction with mortality rates as high as 1 to 2% per hour early after symptom onset without surgical intervention. Operative mortality for acute type A aortic dissection at experienced centers ranges from 7 to 36%, which is well below the more than 50% mortality with medical therapy.”

[Emphasis added].

I accept Dr Bell’s opinion. Mrs Badcock showed obvious signs that she was highly likely to have been suffering from an aortic dissection when she was at the LGH.

I note that Mrs Badcock’s medical records from the LGH contain no record of blood pressure measurement in both arms and nothing with regard to pulse deficits (unlike the records of Ambulance Tasmania). Nor is there any record of anything in the nature of a cardiovascular examination having been carried out.

I think it is clear that staff at the LGH did not understand the significance of the blood pressure difference, and thus missed an opportunity to diagnose the underlying cause for her presentation.

These findings were sent in draft to the LGH for comment. I received from the LGH the results of review commissioned in relation to the death of Mrs Badcock¹ and another patient. I have had regard to that review. I agree with the author of that review that neither the case of Mrs Badcock, nor the other patient (or indeed both considered together), amount to evidence of a "systemic issue of misdiagnosis of aortic dissection."

However, that is not to the point. Considering the evidence as a whole, I conclude that care received by Mrs Badcock at the LGH on Christmas Day 2020 was not of an acceptable standard.

Comments and Recommendations

The circumstances of Mrs Badcock's death are not such as to require me to make any comments or recommendations pursuant to Section 28 of the *Coroners Act 1995*.

I convey my sincere condolences to the family and loved ones of Mrs Badcock.

Dated: 29 November 2021 at Hobart in the State of Tasmania.



Simon Cooper
Coroner

¹ I note the review refers, erroneously, to Mrs Badcock as "Mary," her second name on several occasions.