



MAGISTRATES COURT of TASMANIA

CORONIAL DIVISION



Record of Investigation into Death (Without Inquest)

*Coroners Act 1995
Coroners Rules 2006
Rule 11*

I, Rod Chandler, Coroner, having investigated the death of James Maurice Smith

Find that:

- (a) The identity of the deceased is James Maurice Smith.
- (b) Mr Smith was born on 30 October 1976 and was aged 38 years.
- (c) Mr Smith died on 13 June 2015 at the Royal Hobart Hospital (RHH) in Hobart.
- (d) The cause of Mr Smith's death was haemopericardium (pericardial tamponade) due to an aortic dissection.

Background

Mr Smith was an unmarried Information Technology manager and the father of two daughters. Prior to June 2015 he had enjoyed good health.

Circumstances Surrounding the Death

In the evening of 9 June 2015 Mr Smith presented at the Emergency Department (ED) of the RHH via ambulance. The Patient Care Report with Ambulance Tasmania indicates that Mr Smith had been well during the day but in the evening, when having a bath, he experienced a "rolling sensation" down his neck into his back and then radiating to the lower right side of his abdomen. When he got out of the bath he was unable to control his right leg which also had 'pins and needles.' He was described by the paramedics when they arrived as diaphoretic (perspiring), anxious, hyperventilating and nauseous.

Mr Smith was seen in the ED at 11:41pm by junior resident medical officer, Dr Alice Mulcahy. In her notes she has recorded that Mr Smith, during his bath that evening, "had (an) unusual sensation of pulsation from mouth to stomach as if 'I'd swallowed something huge'." She also noted that in the ambulance he developed low abdominal and right low back pain. On arrival at the ED Mr Smith had an episode of vomiting and diarrhoea after which he reported his right lower limb symptoms had resolved. The impression was recorded as abdominal pain and flank pain with resolved neurology right lower limb. A differential diagnosis of appendicitis versus renal colic versus vascular was made. Venous blood gases showed a lactate level of 5 mmol/l; double the upper limit of normal.

Mr Smith was monitored over the following hours by Dr Mulcahy. She consulted with the medical officer in charge, Dr Richard Austin. He considered the diagnosis was unlikely to be vascular and concluded that Mr Smith had musculoskeletal low back pain and viral gastroenteritis. He was discharged home with ondansetron and a script for panadeine forte along with advice to follow up with his general practitioner. The actual time of discharge is not clear. The last entry made in the nursing notes was at 3.25am.

Mrs Penelope Smith is Mr Smith's mother. She says that her son visited her in the early afternoon of 11 June intending to stay for the evening meal. However, he was unwell, looked "shocking" and "couldn't eat or even hold down a coffee." The following day Mr Smith re-presented at the ED arriving at 2.55pm. At an unrecorded time he was seen by an ED registrar, Dr O'Donnell. The impression recorded was "*?appendicitis? other.*" A surgical review was advised. That did not take place until 11.59pm when Mr Smith was seen by General Surgical Registrar, Dr Nicholas Davies. He was unsure of the diagnosis and listed a number of possible causes including colitis, gastroenteritis, pyelonephritis, renal colic or an unspecified viral illness. He did not consider Mr Smith's undiagnosed back and abdominal pain to be consistent with appendicitis. In his view it was difficult to explain Mr Smith's presentation with a single common diagnosis. He believed the predominant serious diagnosis that needed to be excluded was an epidural abscess. It was decided to proceed with a CT scan of the abdomen. At that time of night an MRI scan was not an available option.

At 4:25am on 13 June consultant radiologist, Dr John Vedelago reported verbally on the CT scan to Dr Davies. He advised that the scan showed aortitis with some aneurysmal dilation and an abdominal aortic dissection. The aortic dissection was said to be 'focal.' There was a thrombus in the superior mesenteric artery with good distal flow and some enlarged lymph nodes in the retroperitoneum. The radiologist recommended a formal CT aortogram, a heart echocardiogram and a vascular review. Dr Davies then reviewed Mr Smith again following which he telephoned vascular surgeon Mr David Cottier to inform him of the patient, the CT findings and to seek advice on appropriate management. It was Mr Cottier's opinion that the aortic dissection was likely incidental to aortitis. He suggested full anticoagulation for treatment of the thrombus, commencement of antibiotics for a presumed infective cause of the aortitis and institution of steroids. Mr Cottier did not accept Mr Smith as a vascular admission but instead suggested that he be referred to rheumatology for admission. In his report to the coroner Mr Cottier includes these statements:

"(Dr Davies) informed me of the presence of dissection in the aorta though my recollection is that this was thought to be focal and I do not recollect being informed that the superior extent of the dissection had not been visualised."

"I have no recollection of being informed about his admission 48 to 72 hours prior to his index presentation to the Emergency Department."

"If I had been informed of this prior attendance to the emergency department and the fact that the upper limit of Mr Smith's aortic dissection was not seen on the CT"

scan, I may have been more likely to have considered the possibility that he was suffering from an acute dissection of his thoracic area.”

At 5.32am Mr Smith was being attended by a nurse when he suddenly appeared to stop breathing. CPR was promptly commenced but Mr Smith could not be revived. He was declared deceased at 6.17am on 13 June 2015.

Post-Mortem Examination

This was carried out by forensic pathologist, Dr Donald Ritchey. In his opinion the cause of Mr Smith's death was haemopericardium (pericardial tamponade) due to an aortic dissection.

Investigation

This has been informed by:

- A review of Mr Smith's records at the RHH carried out by research nurse, Ms L K Newman.
- An affidavit provided by Mrs Smith.
- Medical reports provided by Dr Austin, Dr Davies, Dr Vedelago (2), Mr Cottier and Dr Brian Doyle.
- A report upon Mr Smith's medical care and management prepared by Dr A J Bell, as medical adviser to the coroner.
- Meetings attended by myself, Dr Bell, Ms Newman, Dr Ritchey and State Forensic Pathologist, Dr Christopher Lawrence.

In his report Dr Bell advises:

1. That it was an error on Dr Austin's part to conclude that Mr Smith was suffering from musculoskeletal back pain and viral gastroenteritis when he presented on 9 June 2015. Such conclusion was at odds with the clinical history.
2. It was poor medical practice for Mr Smith's elevated blood lactate to have been ignored. The usual rule is that a patient with abdominal pain and an elevated blood lactate has ischaemia and requires investigation. Ischaemia is a clue that the issue may be vascular in nature.
3. Aortic dissection can be a difficult diagnosis to make. Nevertheless there were symptoms and signs evident on 9 June which required the condition to be considered as a possible diagnosis and for it to be positively excluded. In this context an article

published in The Medical Journal of Australia and available at <https://www.mja.com.au/journal/2014/201/10/collaboration-between-coroner-and-emergency-physicians-efforts-improve-outcomes> is particularly relevant. It was created following a roundtable meeting between members of the Coroners Prevention Unit (Victoria) and emergency physicians following the death of a woman from an undiagnosed aortic dissection. It sets out multiple clinical, system and cultural features of aortic dissection presentation which are likely to assist in the detection and management of the condition. Had the course recommended in this article been followed it is likely that the investigations for Mr Smith would have included a CT aortogram which would have confirmed the diagnosis.

4. The assessment carried out when Mr Smith represented to the ED on 12 June was superficial. Notably, it appears that no consideration was given to the information gained at the earlier presentation. An interval of 8 hours before a surgical review took place was unreasonable and poor practice.
5. That it was misleading for Dr Vedelago to describe the aortic dissection seen on the CT scan of the abdomen as being 'focal' when its superior or upper extent had not been determined by the scan of the abdomen. 'Focal aortic dissection' is a standard medical term which is commonly understood to indicate that urgent surgery is not required.
6. That the opportunity to appropriately treat Mr Smith's aortic dissection was effectively lost when the diagnosis was not made at the time of his first presentation to the RHH.
7. An aortic dissection is a medical emergency. It requires urgent surgery. In Mr Smith's case his prospects of surviving such surgery and resuming a normal life were approximately 75% if that surgery had been undertaken at the time of the first presentation.

Findings, Comments and Recommendations

I accept Dr Ritchey's opinion upon the cause of Mr Smith's death.

Aortic dissection is a serious and life threatening condition. Its prompt diagnosis is necessary to maximise the prospects of survival. I accept that it is often a difficult diagnosis to make and it is in this context that the publication produced upon the initiative of the Victorian Coroners Prevention Unit is particularly helpful. I commend it to the medical profession, most particularly those employed in emergency facilities.

The evidence shows that despite his two presentations to the ED the correct diagnosis of Mr Smith's illness was not made. This was a most regrettable outcome. I am satisfied, accepting the advice of Dr Bell, that at the time of Mr Smith's first presentation aortic dissection should have been included as a differential diagnosis. Appropriate steps taken then to investigate that condition would almost certainly have led to the diagnosis being made. Such an outcome would have given Mr Smith his best chance of survival. After Mr Smith presented at the ED on the second occasion the prospects of his aortic dissection being promptly diagnosed and treated were compromised by the apparent failure on the part

of the attending clinicians to inform themselves of the detail of Mr Smith's earlier presentation and by the 8 hour delay before a surgical review took place. That surgical review led to investigations being commenced which would have eventually enabled the diagnosis of an aortic dissection to be made. However, there was insufficient time for those investigations to be completed and for remedial surgery to be undertaken before Mr Smith's cardiac arrest and regrettable death.

I have decided not to hold a public inquest into this death because my investigation has sufficiently disclosed the identity of the deceased, the date, place, cause of death, relevant circumstances concerning how his death occurred and the particulars needed to register his death under the *Births, Deaths and Marriages Registration Act 1999*. I do not consider that the holding of a public inquest would elicit any significant information further to that disclosed by the investigation conducted by me.

I convey my sincere condolences to Mr Smith's family and loved ones.

Dated: 19 May 2017 at Hobart in the State of Tasmania.

Rod Chandler
Coroner

Explanatory Addendum.

On 3 June 2016 Coroner Olivia McTaggart as Delegate of the Chief Magistrate pursuant to s58(1) of the Coroners Act 1995 directed that the investigation into the death of Mr Smith be re-opened pursuant to s58(1)(b) and (d) and the findings be re-examined by Coroner Rod Chandler. The findings set out in this document are made following that re-examination.