



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 Jason Mark Brook

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

- a) The identity of the deceased is Jason Mark Brook;
- b) Mr Brook died as a result of massive pulmonary embolism due to deep vein thrombosis of the left leg due to a left leg injury and immobilisation following a motor cycle accident;
- c) The cause of Mr Brook's death was pulmonary embolism;
- d) Mr Brook died on 7 November 2014 at 80 Summerhill Drive, Port Sorell, in Tasmania; and
- e) Mr Brook was born in Devonport on 27 April 1969 and was aged 45 years; he was single and was unemployed at the date of death.

In making the above findings I have had regard to the evidence gained in the comprehensive investigation into Mr Brook's death. The evidence comprises an opinion of the forensic pathologist who conducted the autopsy; review by the coronial medical consultant; relevant police and witness affidavits; medical records and reports; and forensic evidence.

In October 2014 Mr Brook travelled to Thailand for a family wedding. Whilst he was there he was involved in a motorcycle accident and sustained injuries to his left foot, including a wound. He sought medical treatment which involved dressing the wound and antibiotics. In consultation with his family, he decided to return to Tasmania in the event that his injury became more serious and required further treatment.

On 21 October 2014, after landing at Devonport airport, he proceeded directly to the Mersey Community Hospital for treatment.

An x-ray was performed which showed that Mr Brook had a comminuted fracture of the first metatarsal bone. The wound was unpacked and cleaned. The wound was left open. He was also treated with intravenous antibiotics. In the morning Mr Brook was transferred to the North West Regional Hospital ("NWRH") and underwent surgical wound washout and debridement

on the 23 October 2014. The wound could not be closed and vacuum closure device applied. The fracture was immobilised in a plaster cast. Delayed primary closure of the wound was performed on the 25 October 2014. Mr Brook was discharged from the NWRH on 25 October 2014.

On 30 October 2014 Mr Brook was seen in the outpatient clinic of the Mersey Hospital and it was noted that the wound was healing satisfactorily.

On 5 November 2014 Mr Brook was reviewed by Dr M Caudwell. There was pain on the top of the foot. The wound looked good, healing cleanly with no signs of infection. The sutures were removed. A below knee fibreglass cast was applied.

In the early hours of 7 November 2014 Mr Brook was at home. He called out from his room to his father, John Brook, stating "I am having a turn". When John entered his son's room he noticed that his breathing was laboured and he was gasping whilst laying on his back. John called 000 for assistance.

Mr Brook's condition deteriorated whilst awaiting the arrival of the ambulance and he became unresponsive. Upon arrival ambulance personnel determined that Mr Brook was deceased.

Upon autopsy, Dr Ruchira Fernando, pathologist, concluded that Mr Brook died as a result of a massive pulmonary embolism ("PE") obstructing blood flow to the lungs. The PE resulted from deep vein thrombosis ("DVT") of the left leg. I accept Dr Fernando's opinion.

Mr Brook was not given anti-coagulation medication in hospital, nor was it prescribed upon his discharge. Mr Brook was a person who was at risk of suffering DVT, being an adult with a lower limb fracture, infection, a prolonged period of immobilisation that was ongoing, and plaster cast immobilisation post discharge.

Dr Anthony Bell, coronial medical consultant, stated in his review that anti-coagulation should be given during the entire period of immobilisation in a cast, including post discharge. He noted that studies show that the rate of DVT is reduced by the use of prophylactic anti-coagulation. He noted that the studies do not show a significant corresponding reduction in the rate of PE. However, there were insufficient patient numbers studied to provide clear conclusions.

Nevertheless, Dr Bell stated that in the case of Mr Brook the PE resulted directly from the left leg DVT. He concluded that if Mr Brook had been receiving anti-coagulation medication, there would have been a significant chance that his DVT, and subsequent death from PE, would have been prevented. I accept Dr Bell's opinion in this regard.

I have received a report from Dr Tony Austin, Interim Director of Medical Services, Tasmania Health Services, North West. Dr Austin has reviewed the treatment provided to Mr Brook. He stated:

"It is the opinion of the clinical leader and the organisation that this patient should have been administered anti-coagulation therapy as per recommended VTE (Venous Thromboembolism) protocol guidelines as the patient had the following risk factors for DVT.

- Adult with lower limb fracture
- Infection
- Prolonged period of immobilisation

- Ongoing immobilisation
- Plaster of Paris immobilisation post discharge.

It is noted that the DVT management of Mr Brook is inconsistent. Upon review it is also noted that daily anti-coagulation was commenced on the day of discharge although not administered. This medication was not continued as discharge medication. It is not clearly known why anti-coagulation therapy was not continued but thought likely due to human error and heavy workload of the junior doctors over the weekend period.

Given that the clinical leader and the organisation are very concerned over the management of this patient, the organisation will undergo a root cause analysis and review into the use of VTE prophylaxis in the THS – North West Region. This will include a retrospective audit of all DVTs post op in the last 12 months and full review of management in these cases to identify trends in management and treatment. In addition medical staff education regarding optimal VTE management will be added into the orthopaedic education timetable. This case review will also be undertaken by the establishment and loaded into the SRLS system to be reviewed again through the usual Mortality and Morbidity committees for discussion.

All the doctors involved in treatment have been involved in the review process and are aware of the demise of Mr Brook. It is unclear without further analysis whether there is a systemic issue or this was a one off omission to align with current VTE protocols. Orthopaedics as a craft will be involved in the RCA to identify any further issues and to ensure future patients are managed according to guidelines.

The organisation acknowledges that Mr Brook died as a result of pulmonary embolus which has been identified by the pathologist as originating from a left calf DVT. Mr Brook should have been further anti-coagulated given his presentation and risk factors. The treating teams and the establishment are remorseful that Mr Brook died from his condition and will endeavour to extract learnings and better practice as a result.”

I acknowledge that the hospital accepts that anti-coagulation treatment should have been administered to Mr Brook for the time that he was immobilised and that the failure to do so increased the risk of his death. This omission to supply Mr Brook with this standard treatment was most regrettable.

The Brook family raised the question of Dr Austin attributing responsibility to the junior medical staff for failure in anticoagulation. Dr Bell notes several issues in this regard. The initial post-operative instruction of the surgeon, Dr Nara (Narayanasamy), was for “clexane tonight”. On this instruction, the junior doctor wrote up a single dose of clexane for that night. Usually the instruction would be interpreted to commence clexane prophylaxis that night and to continue it. Secondly this error meant that the drug chart did not have clexane recorded as a reminder to the discharging doctor that anticoagulation was required. Thirdly, there was no instruction for anticoagulation by Dr Caudwell after the surgery of 25 October 2014. Fourthly, the consultants and registrars on the orthopaedic ward round of 24 October 2014 did not notice the lack of prophylactic anticoagulation at that time. Thus, Dr Bell observes that errors occurred at multiple levels. I accept his opinion.

I endorse the efforts that have been made by the hospital, as set out in Dr Austin’s report. I acknowledge the ongoing audit and education processes being undertaken to ensure appropriate anti-coagulation treatment to patients in the future.

Comments and Recommendations:

The death of Mr Brook highlights the need for vigilance and effective processes to ensure that patients receive appropriate post-surgery anti-coagulation therapy as recommended by relevant guidelines.

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

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

Dated: 26 August 2016 at Hobart in the State of Tasmania.

Olivia McTaggart
Coroner

This finding has been amended pursuant to an order under Section 58 of the Coroners Act made on 1 August 2016 and replaces the finding dated 27 June 2016.