



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 Catherine Joy Davis

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

- a) The identity of the deceased is Catherine Joy Davis;
- b) Ms Davis was born in Hobart on 6 September 1985 and was aged 31 years;
- c) Ms Davis died at the Royal Hobart Hospital (RHH) in Hobart on 25 January 2017;
and
- d) The cause of Ms Davis' death was urosepsis due to acute pyelonephritis.

Background

Ms Davis was the daughter of Michael and Carolyn Davis. Her parents had separated and she resided with her father at Claremont. Since birth Ms Davis had suffered from lissencephaly, a condition involving a malformation of the brain and associated with significant disability. For Ms Davis, the condition meant severe intellectual impairment, visual impairment, chronic constipation, and epilepsy. She was non-verbal. Her father was her full-time carer.

Circumstances Surrounding the Death

On 16 January 2017 Ms Davis presented at the Emergency Department (ED) of the RHH with vomiting and constipation. She was admitted and over the following days her ailments gradually resolved. She was discharged home in the late morning of 24 January.

Mr Davis reports that in the afternoon of 24 January his daughter again became unwell. She was moaning and appeared to be in pain. She had a temperature (38.4°C) and her urine was noted to be dark and smelly. Mr Davis returned his daughter to the ED arriving at around 6.30pm.

At examination Ms Davis' heart rate was 103 bpm, her blood pressure was 88-94 mmHg systolic and respiratory rate was 24 bpm. She was noted to be afebrile, the chest was clear, the C-reactive protein (CRP) was 53 mg/L with a white cell count of 12.5/nL and a neutrophil count of 19/nL. A working diagnosis was made of a lower urinary tract infection (UTI) and Ms Davis was given 500ml of normal saline intravenously. However, decisions upon the preferred antibiotic and its administration were deferred pending a review by the General Medicine Registrar. She was admitted to the Medical Unit that evening.

At around 12.40am on 25 January it was agreed that the working diagnosis of UTI be maintained. At the same time oral antibiotics were prescribed to be delivered via Ms Davis' percutaneous endoscopic gastrostomy (PEG) tube. However, the first dose was not given until 8.30am.

There was a handover in the morning of 25 January and Dr Nick Harkness assumed Ms Davis' care. Again the diagnosis of UTI was maintained with the treaters being satisfied that there were no definite features present to suggest pyelonephritis.

Ms Davis continued to be monitored during the course of 25 January. At 11.50pm she was found to be deceased.

Post-Mortem Examination

This was carried out by forensic pathologist, Dr Donald Ritchey. In his opinion the cause of Ms Davis' death was urosepsis due to acute pyelonephritis. He states that significant contributory factors were lissencephaly with intellectual impairment, epilepsy, cerebral palsy and chronic pyelonephritis.

Dr Ritchey reported that at autopsy it was noted that Ms Davis' brain was abnormally formed in a pattern characteristic of lissencephaly. He explained this condition to be a malformation of the cerebral cortex caused by a defective migration of neurones during foetal development. The condition has several distinct genetic causes that may reflect 'new mutations' and therefore are not necessarily inherited gene defects. He says that affected individuals have abnormally formed brains that cause a wide spectrum of disability that often includes intellectual impairment, seizures, blindness and cerebral palsy.

Dr Ritchey further explained that urosepsis is a bacterial infection of the blood due to infection of the urinary tract. He noted that chronically disabled individuals, especially those with urinary incontinence are at greatly increased risk of urinary tract infection and its complications including acute pyelonephritis and sepsis.

Investigation

This has been informed by:

1. A Police Report of Death.
2. A post-mortem report provided by forensic pathologist, Dr Donald Ritchey, along with a supplemental advice.
3. An affidavit provided by Ms Davis' father.
4. A review of Ms Davis' hospital records carried out by clinical nurse, Ms L K Newman.
5. Reports received from Dr Harkness.
6. Reports received from Dr A J Bell as medical adviser to the coroner.

Findings, Comments and Recommendations

The first issue to be addressed is the cause of Ms Davis' death. This arises because of the opinion of Dr Harkness that Ms Davis' death was attributable to acute aspiration and not to urosepsis caused by acute pyelonephritis as opined by Dr Ritchey. I have been advised by Dr Ritchey in response to Dr Harkness' criticism of his opinion that:

“.....the gross autopsy revealed florid pus emanating from the right kidney as detailed in my report. Florid (i.e. copious) pus seen at an autopsy is always significant but not necessarily causative of death. Much depends on further context. That context includes urine culture obtained clinically that grew Escherichia coli the most common organism causing urinary tract infections and pyelonephritis.

“The context also includes the location of the pus within the renal pelvis and microscopically within the kidney parenchyma. This represents a serious, deep seated infection that by the fact of its location is serious and life-threatening. Laboratory values available to me also suggested that sepsis was likely given an elevated white blood cell count and toxic granulation of neutrophils seen in the peripheral blood film.

“In summary, I am confident that the cause of death as given in my report is correct.....I believe most re-viewers would find (a labelled gross photograph showing copious pus seen at autopsy), compelling in itself.”

Dr Ritchey is an experienced forensic pathologist. Unlike Dr Harkness he had the advantage of conducting the post-mortem examination. That examination made it blatantly clear that Ms Davis was suffering from urosepsis due to pyelonephritis at the time of her death. Whilst it is true that it does not necessarily follow that a medical condition found at autopsy must be the cause of death, I am nevertheless satisfied in this case that Ms Davis' urosepsis, when considered in the context of those other factors described by Dr Ritchey, was the reason for her death. I find accordingly.

Shortly after her presentation at the RHH on 24 January 2017, UTI was identified as the likely cause of Ms Davis' ill-health and this diagnosis was maintained up to the time of her death. It is now apparent, and I find accordingly, that UTI was an incorrect diagnosis and that Ms Davis' signs and symptoms were instead attributable to pyelonephritis.

I make the obvious observation that patients suffering from disabilities are at greater risk of misdiagnosis than those patients who are not disabled. Ms Davis' inability to verbalise made her medical management including diagnosis particularly difficult. It is for these very reasons that patients like Ms Davis require the closest and most considered care and her untimely death should serve as a reminder of this need.

I have noted above that Ms Davis presented at the ED at around 6.30pm on 24 January 2017 and that shortly thereafter a working diagnosis of UTI was made. There was a delay in settling on her antibiotic treatment but a prescription was eventually provided just after midnight on 25 January. Despite this, the first dose was not administered until 8.30am on 25 January; that is more than 12 hours after the diagnosis was made and over 8 hours after the prescription was provided. These delays have not been explained. Clearly such delays have the capacity to compromise patient care and I **recommend** that the RHH carry out an investigation of the delays in this instance with a view to implementing steps to avoid their repetition.

There is a final matter which compels my comment. In the course of the investigation Dr Harkness provided a report which included statements critical of Dr Bell, his integrity, objectivity and professional competence. These comments were, in my opinion, uncalled for, unprofessional and demonstrate an ignorance of the coronial process. They reflect poorly on Dr Harkness and I reject them without qualification.

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 her death occurred and the particulars needed to register her 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. The circumstances of the death do not require me to make any further comment or to make any recommendations.

I convey my sincere condolences to Ms Davis' family and loved ones.

Dated: 18 April 2019 at Hobart in the State of Tasmania.

Rod Chandler
Coroner