



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 Audrey Doreen Hargraves

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

- a) The identity of the deceased is Audrey Doreen Hargraves;
- b) Mrs Hargraves died in the circumstances set out in this finding;
- c) Mrs Hargraves died as a result of multiple post-operative complications, including myocardial ischaemia enteritis and lobar pneumonia following reversal of Hartmann's procedure and extensive adhesiolysis; and
- d) Mrs Hargraves died on 31 August 2018 at the Launceston General Hospital, Launceston, Tasmania.

In making the above findings I have had regard to the evidence gained in the comprehensive investigation into Mrs Audrey Doreen Hargraves' death. The evidence comprises the police report of death; an opinion of the forensic pathologist who conducted the autopsy; toxicological evidence; senior next of kin correspondence and medical records and reports.

Mrs Audrey Doreen Hargraves was born on 16 February 1938 and was aged 80 years at her death. She was widowed and resided alone, however her daughter visited her often. Her medical history included hypertension, hyperlipidaemia and gastro-oesophageal reflux. She was prescribed medication for these conditions.

In November 2017 Mrs Hargraves complained about pain in her abdominal area and was found to be suffering from acute diverticulitis, however this settled quickly and no further treatment was necessary at that time. This condition flared again shortly afterwards and, on 27 December 2017, Mrs Hargraves underwent a Hartmann's procedure at the Launceston General Hospital. She was found to have acute diverticulitis (severe attack of infection and inflammation of the large bowel) and perforated sigmoid colon diverticular disease (small pockets forming on inside of bowel that bleed or become infected).

A Hartmann's procedure is an operation where the diseased part of the sigmoid colon and / or rectum is removed. This involves removal of blood vessels and lymph nodes to this part of the

bowel. If the surgeon does not assess it as appropriate to rejoin the bowel (because of infection, obstruction or perforation), the end of the colon is brought to the surface on the left side of the abdomen to create a colostomy. The rectum that is left behind is usually closed off with staples or sutures and left inside the abdomen.

In the case of Mrs Hargraves, the surgery was successful and a colostomy bag was put in place. She had follow-up checks and it was recommended by Mr David Lloyd, colorectal surgeon, that the procedure could be reversed.

On 20 August 2018 Mrs Hargraves was admitted to Calvary Health Care St Luke's hospital in preparation for surgery the following day to reverse the procedure.

On 21 August 2018 Mrs Hargraves underwent a reversal of the Hartmann's procedure. This surgery proved difficult, as the surgeon located a frozen pelvis, where organs are attached together by internal scars or adhesions and cannot move freely or be separated without cutting. Because of this issue, the surgery was extended to a duration of eight hours. After the operation constant draining was required of the area. There was evidence of a post-operative ileus or a mechanical bowel obstruction. On 24 August her condition deteriorated and, on 27 August, the decision was made to transfer Mrs Hargraves to the Launceston General Hospital (LGH) for intravenous feeding (TPN) as her bowel function had not returned. At the LGH drugs to stimulate the bowel were administered, a peripherally placed central line was inserted and TPN commenced.

Mrs Hargraves continued treatment in the LGH over the following days. Mrs Hargraves remained alert and responsive but continued to complain of intermittent pain.

On 31 August 2018 at 3.00pm the physiotherapist visited Mrs Hargraves, however she did not participate in inpatient therapy as she was feeling unwell. Mrs Hargraves was visited by a registered nurse at 3.20pm, where she was alert and oriented but requested pain relief. All vital signs were recorded at that time as remaining within acceptable parameters, although it was noted Mrs Hargraves was not feeling well enough to shower. Mrs Hargraves' daughter had been present throughout the day.

At 3.40pm Mrs Hargraves was located unresponsive with no pulse. Nursing staff commenced CPR at 3.41pm for 23 minutes, until 4.00pm when CPR ceased and Mr Lloyd notified Mrs Hargraves' family of her death.

Mr Lloyd and Dr Peter Renshaw (Executive Director of Medical Services, Tasmanian Health Service-LGH) discussed together the sudden demise of Mrs Hargraves, issued a Life Extinct

Certificate and requested that a non-coronial autopsy be arranged for Monday 3 September 2018. If any concerns were located as a result of the autopsy, the intention was that the Coroners Office was to be notified with a view to reporting Mrs Hargraves' death.

On 1 September 2018 Mrs Hargraves' son, Rodney John Hargraves, consented for a non-coronial autopsy to be conducted upon Mrs Hargraves in order to determine the cause of death.

The autopsy, conducted by pathologist, Dr Roseanne Devadas, revealed that the surgical joins were intact. There was evidence of myocardial ischaemia and an old myocardial infarction with stable atherosclerotic coronary artery disease. There was evidence of ischaemic enteritis. Lobar pneumonia was present in the lungs.

The case was reviewed by the medical advisor to the Coroner Dr A J Bell MD FRACP FCICM with a view to commenting upon any medical treatment issues. In his report in this investigation, Dr Bell observed that, based upon a 2010 electrocardiogram, Mrs Hargraves suffered a long QT syndrome, being associated with an increased risk of polymorphic ventricular tachycardia, a characteristic life-threatening cardiac arrhythmia. He noted upon the history that Mrs Hargraves appeared to have had few problems with this condition. In his report Dr Bell stated;

“With transfer to the LGH the patient was commenced on bowel stimulators to try and relieve the ileus. Erythromycin was commenced and is a drug that causes QT prolongation. The drug has a twofold increased risk of sudden cardiac death over nonusers in one report. Metoclopramide was also commenced and again the drug affects QT interval. The antibiotic azithromycin was ceased after the dose on 29.08.2018 and thus probably had little influence”.

In his report, Dr Bell stated that a contributor to Mrs Hargraves' cardiac arrest was the rapid infusion of QT prolonging drugs upon admission to the LGH. I have also received in evidence a helpful report from Dr Renshaw acknowledging the possible contribution of the QT prolonging drugs in the cardiac arrest, however noting that several other factors were also contributors to her cardiac arrest.

Upon the evidence, particularly the expert evidence of Dr Renshaw and Dr Bell, I find that the cause of Mrs Hargraves' sudden cardiac arrest was multi-factorial, with contributing factors being her pre-existing heart disease, the long and difficult surgery, slow recovery (causing

deconditioning) and her decreased nutritional state. I find that her long QT syndrome, exacerbated by the QT-prolonging drugs was also a contributing factor.

Comments and Recommendations

The treatment and care provided to Mrs Hargraves at St Luke's was of good standard. I note that an electrocardiogram was also performed at St Luke's on 24 August 2018 (showing the long QT interval) but Mrs Hargraves was not receiving medication at that hospital that prolonged the QT interval.

The care provided to Mrs Hargraves at the LGH was also of good standard, although the treating medical staff should have performed an electrocardiogram (or obtained the results of the recent test at St Luke's) before administering QT-prolonging drugs. The well-recognised risks associated with these drugs were not sufficiently appreciated at the time.

Despite these comments, I am not able to find that Mrs Hargraves would have survived had different drugs been administered in response to the risk posed by her long QT syndrome. As discussed, there were multiple other factors contributing to her unfortunate cardiac arrest which may have meant that her death would have occurred in any event.

I **recommend** that hospital medical staff perform an electrocardiogram (ECG) as a screening test before patients are placed on multiple QT prolongation treatments.

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

Dated: 3 April 2020 at Hobart Coroners Court in the State of Tasmania.

Olivia McTaggart
Coroner