IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

COR 2018 003819

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

*Section 67 of the **Coroners Act 2008***

Findings of:	Jacqui Hawkins, Deputy State Coroner
Deceased:	Robert Albert Burns
Date of birth:	3 January 1943
Date of death:	2 August 2018
Cause of death:	1(a) Multiorgan dysfunction syndrome complicating anastomotic leak following hemicolectomy for caecal adenocarcinoma
Place of death:	St Vincent's Hospital, 41 Victoria Parade, Fitzroy, Victoria, 3065
Keywords:	ANASTOMOTIC LEAK; CAECAL ADENOCARCINOMA; COLORECTAL SURGERY; SEPSIS; DELAY IN TRANSFER; MULTI-DISCIPLINARY CONSULTANT ROUNDS; SURGEON TO SURGEON COMMUNICATION

INTRODUCTION

1. On 2 August 2018, Robert Albert Burns was 75 years old when he passed away at St Vincent's Hospital. Mr Burns underwent bowel surgery on 2 July 2018 at Warrnambool Hospital before being transferred to St Vincent's Hospital. At the time of his death, Mr Burns lived at home with his wife, Beverley Burns.

2. His medical history included hypertension, a previous cerebrovascular accident, obstructive sleep apnoea, diabetes mellitus, chronic kidney disease and bronchiectasis.

THE CORONIAL INVESTIGATION

3. Mr Burn's death was reported to the Coroner as it fell within the definition of a reportable death in the *Coroners Act 2008* (the Act). Reportable deaths include deaths that are unexpected, unnatural or violent or result from accident or injury.

4. The role of a coroner is to independently investigate reportable deaths to establish, if possible, identity, medical cause of death, and surrounding circumstances. Surrounding circumstances are limited to events which are sufficiently proximate and causally related to the death. The purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability.

5. Under the Act, coroners also have the important functions of helping to prevent deaths and promoting public health and safety and the administration of justice through the making of comments or recommendations in appropriate cases about any matter connected to the death under investigation.

6. Upon receipt of the family's concerns in relation to Mr Burn's death, I requested the Coroner's Prevention Unit (**CPU**) Health and Medical Investigation Team (**HMIT**) to conduct a review into the care provided whilst at Warrnambool and St Vincent's Hospital.[1] I also obtained an expert report from Dr Susan Shedda to assist in my investigation.

7. This finding draws on the totality of the coronial investigation into the death of Mr Burns including evidence contained in the coronial brief. Whilst I have reviewed all the material, I

[1] The Coroners Prevention Unit (CPU) was established in 2008 to strengthen the prevention role of the coroner. The unit assists the Coroner with research in matters related to public health and safety and in relation to the formulation of prevention recommendations. The CPU also reviews medical care and treatment in cases referred by the coroner. The CPU is comprised of health professionals with training in a range of areas including medicine, nursing, public health and mental health.

will only refer to that which is directly relevant to my findings or necessary for narrative clarity. In the coronial jurisdiction, facts must be established on the balance of probabilities.[2]

MATTERS IN RELATION TO WHICH A FINDING MUST, IF POSSIBLE, BE MADE

Identity of the deceased

8. On 2 August 2018, Robert Albert Burns, born 3 January 1943, was visually identified by his wife, Beverley Jean Burns., who signed a formal statement of identification to this effect.

9. Identity is not in dispute and requires no further investigation.

Medical cause of death

10. Senior Forensic Pathologist, Dr Matthew Lynch from the Victorian Institute of Forensic Medicine (**VIFM**), conducted an examination on 6 August 2018. Dr Lynch considered the Police Form 83, medical records and deposition from St Vincent's Hospital, and the post-mortem computerised tomography (**CT**) scan and provided a written report of his findings dated 6 August 2018.

11. The post-mortem examination was consistent with Mr Burn's history.

12. Dr Lynch reviewed the post-mortem CT scan which revealed calcific coronary artery disease and bilateral pleural effusions.

13. Dr Lynch provided an opinion that the medical cause of death was 1 (a) multiorgan dysfunction syndrome complicating anastomotic leak following hemicolectomy for caecal adenocarcinoma.

14. I accept Dr Lynch's opinion.

Circumstances in which the death occurred

15. On 2 July 2018, Mr Burns underwent surgery at Warrnambool Hospital. A hemicolectomy for carcinoma of the caecum was performed. Initially this was to be a laparoscopic procedure but was changed to an 'open' procedure following difficulties caused by dense adhesions in the

[2] Subject to the principles enunciated in *Briginshaw v Briginshaw* (1938) 60 CLR 336. The effect of this and similar authorities is that coroners should not make adverse findings against, or comments about, individuals unless the evidence provides a comfortable level of satisfaction as to those matters taking into account the consequences of such findings or comments.

gallbladder. After the surgery Mr Burns was admitted to the intensive care unit (**ICU**) as planned.

16. Mr Burn's initial post-surgery recovery was normal, apart from a possible chest infection and blood sugar issues.

17. On 6 July 2018, Mr Burns was drowsy but was not experiencing pain. He was noticed to have developed a facial droop and a CT brain scan was ordered. The results were normal. Blood tests demonstrated falling inflammatory markers (CRP and white blood cell count) but worsening kidney function. Chest x-rays demonstrated pulmonary congestion. His persistent high blood sugar levels, falling urine output and his overall condition prompted a transfer back to the ICU.

18. Mr Burn's treating team held a meeting with the family to explain his condition, specifically that he was not progressing as hoped. It was believed that he had developed a critical illness, most likely multi-organ failure, in the setting of multiple comorbidities.

19. A surgical review conducted at this time specifically noted no evidence of anastomotic issues or intra-abdominal or wound infection. Over the course of the evening in ICU, Mr Burns was commenced on further antibiotics and required medication to support his blood pressure and cardiac function.

20. Mr Burns appeared to improve over the following days, however he continued to experience issues with his kidneys. The treating team were concerned that he may have developed sepsis or a chest infection.

21. On 10 July 2018, Mr Burns's abdomen was distended. A CT scan was ordered to determine the source of infection, including an anastomotic leak, a collection of pus or other problem. The scan identified a moderate amount of free fluid, dilated loops of small bowel, but no free gas.

22. The following day a surgical review found Mr Burns's abdomen was tender. A further review of the CT scan concluded that the fluid in the abdomen most likely represented the source of the infection. However, Mr Burns was considered to be too high a risk to take back to theatre in Warrnambool.

23. A transfer to Geelong ICU was proposed, however the surgical team declined to accept Mr Burns. This was apparently due to an impending need to have a 'permacath', which required a tertiary centre. Mr Burns remained at Warrnambool Hospital.

24. On 12 July 2018, Mr Burns continued to deteriorate with renal failure and sepsis. This was believed to be originating in the intra-abdominal area. His abdomen was distended and diffusely tender. The surgical team recommended against opening the abdomen and planned to undertake a CT guided aspiration of the free fluid in Mr Burns' abdomen.

25. Mr Burns was transferred to St Vincent's Hospital on the evening of 12 July 2018 and was admitted to the ICU.

26. A further abdominal CT scan was conducted which showed extensive free fluid. Mr Burns was taken to surgery on 13 July 2018 and an anastomotic leak with contamination of peritoneal with pus and faeces was found. This was treated with an ileostomy, peritoneal washout, ongoing antibiotics, and ICU support including dialysis, artificial ventilation, blood pressure support and intravenous nutrition.

27. A further CT scan on 22 July 2018 demonstrated further fluid collected in the abdomen and was believed to represent ongoing sepsis. However Mr Burns was not considered fit for another surgery. After three weeks of ICU care it became clear that Mr Burns was unlikely to improve and he was transitioned to palliative care. He passed away on 2 August 2018.

28. South West Healthcare reviewed Mr Burns' case in October 2018 and reported:

> *Existing surgical dogma was acknowledged, in that one should always consider anastomotic leak in the setting of clinical deterioration. It was not clear at what exact stage the anastomosis may have leaked between the index operation 2 July and the laparotomy 13 July (were the findings were then faecal contamination with mobilisation of the anastomosis; otherwise free intraperitoneal fluid only) to know when any re-laparotomy would ideally have been timed. It was noted that any re-laparotomy, on this metabolically unwell man with comorbidities so limiting physical reserves, would have also carried its own inherent risks. It was acknowledged that as always clinical judgement is critical and of course as in this case stands to be scrutinised.*

29. South West Healthcare did not make any recommendations.

FAMILY CONCERNS

30. Beverley Burns, Mr Burns' wife, wrote to the Court and raised concerns as to the care provided to Mr Burns prior to his death. In particular, Mrs Burns was concerned that her

husband was not taken back to surgery in Warrnambool, and that there was a delay in sending him to St Vincent's Hospital for further treatment.

31. Upon receipt of these concerns, I requested the HMIT conduct a review into the care provided to Mr Burns. The HMIT held concerns with the medical care provided and suggested I obtain an expert report from Dr Susan Shedda, Colorectal Surgeon. I have outlined the details of these investigations below.

HMIT REVIEW OF CARE

32. The HMIT considered that the initial care and assessment of Mr Burns was reasonable. He had a pre-operative assessment by a specialist physician which concluded that he was fit for surgery, and although the type of operation was changed intra-operatively, he underwent the procedure without any apparent problems. He was admitted to the ICU post operatively as a precaution and was considered well enough to be discharged to the surgical ward the following day.

33. He was attended to regularly by both medical and surgical teams. There were notes from both teams recording assessments, plans, diagnosis, and communication with family.

34. Changes in Mr Burn's condition were recognised and responded to in a timely fashion, although this did not involve ruling out an intra-abdominal cause for his deterioration. The HMIT noted that this was specifically considered by the surgical team on 7 July 2018. There is no record of the surgical unit reviewing Mr Burns in the ICU on the day following this comment. It appears that both the medical and surgical teams questioned the possibility of an abdominal cause for his deterioration, however neither sought to investigate with a CT scan until day eight.

35. It was apparent from the medical records that the various specialist ward rounds occurred at different times, and that on occasion their clinical findings were different. This was particularly the case regarding abdominal tenderness. However, there was no documented 'disagreement' with each unit's management, and on some occasions one unit's management plan is to defer to the management plan of the other unit.

36. There does not appear to have been documented joint discussion, multidisciplinary meetings, joint decision making or an agreed multidisciplinary plan. The HMIT considered that joint ward rounds and management discussion may have assisted to reach an earlier conclusion.

37. The HMIT considered a delay in considering or excluding intra-abdominal cause, including an anastomotic leak, as the underlying cause of Mr Burn's deterioration from around three to five days post-surgery.

38. Medical staff appear to have relied upon clinical assessment to dismiss the possibility of an intra-abdominal problem. The HMIT considered that there were other markers suggesting infection, but these were thought to be due to other causes. On day five it was noted that an abdominal cause could not be ruled out, but it was not until day eight post-surgery that a CT scan of Mr Burns' abdomen was performed.

39. The HMIT also noted there was a possible delay in acting upon the CT scan result and ensuring timely transfer to a tertiary centre. The CT scan was obtained on day eight, but Mr Burns was not transferred to St Vincent's until day 10. By this time. Mr Burns was considered to be too unwell to undergo surgery in Warrnambool. The HMIT considered that earlier decision making may have placed Mr Burns in a better position to have surgery at Warrnambool, or to be transferred in a better condition for surgery elsewhere.

40. The HMIT recommended I obtain an expert report to clarify these matters.

DR SUSAN SHEDDA – EXPERT REPORT

41. Dr Susan Shedda, Colorectal Surgeon noted that complications after colorectal surgery occur in approximately one third of patients. Approximately 5.8% of these require surgery, and many have aetiologies.

42. Dr Shedda explained that while a possible anastomotic leak was the most serious concern, there were other possibilities for Mr Burns' deterioration, such as respiratory, neurological, and infection.

43. The diagnosis of an anastomotic leak relies on clinical, radiological, biochemical, and haematological sources of information, all of which will factor into clinical judgment. Weighing into this process is also the various grades of anastomotic leak, which can range from small perianastomotic collections to a complete dehiscence of the anastomosis.

44. Dr Shedda noted that Mr Burns had been physically examined and at various times had a tender and non-tender abdomen. She noted that while a CT scan of the abdomen and pelvis is performed in the evaluation for an anastomotic leak, it can unfortunately be unreliable. Approximately half of CT scans performed demonstrate findings consistent with a leak. The

presence of fluid is highly sensitive but not specific in this setting. A 'negative' CT scan does not exclude a leak, and any investigation needs to be interpreted in consideration of the other information available.

45. Mr Burns underwent a CT scan on 10 July 2018. Dr Shedda noted that Mr Burns had not improved in the ICU since 7 July. In considering whether further surgery should be undertaken, the medical staff were required to balance:

    a) Time since the first laparotomy;

    b) Effect of a negative laparotomy; and

    c) Effect of not operating.

46. In Dr Shedda's opinion, Mr Burns had not significantly improved for five days since his second admission to ICU. Despite the initial changes in his clinical status on 9 July 2018, on 10 July he showed clinical signs of abdominal tenderness. His abdominal signs documented in the ICU notes by the surgical team on 11 July 2018 were distension and tenderness. The CT scan of the abdomen demonstrated large amounts of free fluid and an unknown source of sepsis. Considering both factors, Dr Shedda opined that a laparotomy could have been useful to visualise the anastomosis to exclude it as a cause.

47. Dr Shedda referred to the Victorian Surgical Consultative Council (**VSCC**) clinical practice guide on sepsis following colorectal surgery. The VSCC guide highlights that the source of sepsis post-surgery involving an anastomosis is often difficult to determine. Dr Shedda noted that the only method to clearly exclude an anastomotic leak would be direct vision during a laparotomy. However, this is not always appropriate and clinical judgment is required as to the risks involved.

48. On 11 July 2018, Mr Burns was treated via percutaneous drainage. Dr Shedda was of the opinion that this treatment is an excellent adjunct where there is an abscess cavity. This is because there is a contained localised area of sepsis which is poorly treated by systemic antibiotics. However, she noted the CT scan reported a large amount of fluid and did not indicate a discrete collection. Therefore, the purpose of percutaneous drainage was unclear in Mr Burns' treatment.

49. The remaining option of laparotomy needed to be balanced against the risk of surgery and the availability of resources at Warrnambool Hospital. There is a mortality risk in a laparotomy.

Given the false negative rate of CT scans for anastomotic leaks, the exclusion of a leak from a CT scan may not be an adequate conclusion when the patient is deteriorating.

50. The decision to transfer Mr Burns to St Vincent's Hospital was made on 11 July 2018 as he required a permacath to manage his renal function. Dr Shedda did not identify any further clinical deterioration within that 48-hour time frame. Optimal care would involve controlling the source of sepsis as soon it was identified. Dr Shedda noted that as well as the delay in transferring Mr Burns, surgery was not performed at St Vincent's until after another CT scan.

51. In the medical notes dated 13 July 2018, the Colorectal Fellow was telephoned and recommended not to intervene unless there were 'signs of anastomotic leakage' and to repeat the CT scan prior to recommencing haemofiltration.

52. The repeat CT scan indicated a large amount of fluid. The treating team proposed to perform a laparotomy in the morning. Dr Shedda noted that the surgeons at St Vincent's Hospital did not immediately proceed to a laparotomy on Mr Burn's arrival on 12 July 2018, but instead waited until the next morning. The impact of the delay in transfer was not entirely clear.

FINDINGS AND CONCLUSION

53. Pursuant to section 67(1) of the *Coroners Act 2008* I make the following findings:

    a) the identity of the deceased was Robert Albert Burns, born 3 January 1943;

    b) the death occurred on 2 August 2018 at St Vincents Hospital, 41 Victoria Parade, Fitzroy, Victoria, 3065, from multiorgan dysfunction syndrome complicating anastomotic leak following hemicolectomy for caecal adenocarcinoma; and

    c) the death occurred in the circumstances described above.

54. I have considered Dr Shedda's conclusions. Whilst I note the HMIT's concerns as to the medical care provided, Dr Shedda did not consider the care provided to be unreasonable. I accept Dr Shedda's findings in this regard.

RECOMMENDATIONS

Pursuant to section 72(2) of the Act, I make the following recommendations to South West Health Care (**SWHC**):

(i) Conduct a review of their approach to both the deteriorating and 'not progressing' post-operative colorectal surgical patient with a view to reliably and consistently applying the recommendations of the Victorian Surgical Consultative Council.

(ii) Implement multi-disciplinary consultant ward rounds or management meetings in ICU, particularly with regards to unstable or deteriorating patients with multiple potential problems who are failing to respond to treatment as expected.

(iii) Implement a policy of surgical 'peer review' of deteriorating or non-progressing patients.

(iv) Implement a policy whereby failed attempts by junior medical staff to transfer a patient to a higher level of care are escalated to a consultant to ensure timely transfer by discussion between peers at the sending and receiving hospital.

(v) Implement a policy of direct surgeon to surgeon communication when a complicated and/or deteriorating patient is in need of transfer for care by another surgeon at another hospital.

I convey my sincere condolences to Mr Burns' family for their loss.

I direct that a copy of this finding be provided to the following:

Mrs Beverley Burns, Senior Next of Kin

Dr Nicholas Van Zyl, Medical Director – South West Healthcare

Ms Donna Fillipich, Legal Counsel – St Vincent's Hospital

Dr Joe Ragg

Dr Brendan Mooney

Signature:

Jacqui Hawkins

Deputy State Coroner

Date: 9 May 2022

NOTE: Under section 83 of the ***Coroners Act 2008*** ('the Act'), a person with sufficient interest in an investigation may appeal to the Trial Division of the Supreme Court against the findings of a coroner in respect of a death after an investigation. An appeal must be made within 6 months after the day on which the determination is made, unless the Supreme Court grants leave to appeal out of time under section 86 of the Act.