

IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2008 / 2043

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 60(1)

Section 67 of the Coroners Act 2008

Inquest into the Death of: MARGARETA SNOPEK

Delivered On: 5 February 2014

Delivered At: Coroner's Court of Victoria
Level 11, 222 Exhibition Street
Melbourne VIC 3000

Hearing Dates: 8th and 9th July 2013

Findings of: HEATHER SPOONER, CORONER

Police Coronial Support Unit Leading Senior Constable King Taylor

I, HEATHER SPOONER, Coroner having investigated the death of MARGARETA SNOPEK

AND having held an inquest in relation to this death on 8th and 9th July 2013

At MELBOURNE

find that the identity of the deceased was MARGARETA SNOPEK

born on 22 June 1940

and the death occurred on 18 March 2008

at Dandenong Hospital, 135 David Street, Dandenong 3175

from:

- 1 (a) LITHIUM TOXICITY
- 1 (b) CHEST INFECTION
- 1 (c) BIPOLAR DISORDER
- 2 ALZHEIMER'S DISEASE

in the following circumstances:

1. Mrs Margareta Snopek was aged 67 when she died. She resided with her husband Mr Josip Snopek at 51 Laemmle Street, North Dandenong. Mrs Snopek's family and a daughter Ms Bernadette Snopek were involved in assisting with her care and attendance at medical appointments.
2. Mrs Snopek had a lengthy past medical history, which included hypertension, schizophrenia, bipolar disease and recently diagnosed Alzheimer's Disease. Mrs Snopek was prescribed Lithium Carbonate 250mg twice daily over many years for the treatment of her schizophrenia and bipolar disease. In January 2008 she was commenced on the Angiotensin-Converting-Enzyme (ACE) inhibitor Perindopril (also known as and referred to hereinafter as coversyl) for treatment of hypertension.
3. The family of Mrs Snopek wrote to the court expressing their concerns about the medical management. They also expressed concern about Doveton Medical Centre prescribing coversyl to Mrs Snopek when she was already being prescribed lithium.
4. The death of Mrs Snopek was not reported to the coroner in the usual way however when the family correspondence was received, it was decided to treat it as a report and the medical records were obtained. Unfortunately, there was no opportunity for a post mortem examination upon the body of Mrs Snopek.

Coroners Prevention Unit, Health and Medical Investigation Team (HMIT)¹

5. I directed the Coroners Prevention Unit, Health and Medical Investigation Team (HMIT), to review the death of Mrs Snopek.²
6. In relation to Lithium and ACE inhibitor monitoring it was apparent that when commencing Coversyl, Lithium concentration and renal function should be monitored.
7. Lithium has a narrow therapeutic index and is excreted almost entirely by the kidneys. Renal impairment from any cause increases both sodium and Lithium reabsorption.
8. The Royal Australasian College of General Practitioners noted on their website in February 2013 that once Lithium levels are within the therapeutic level, monitoring is to occur annually and those taking lithium are to be advised to report symptoms that require dose reduction. These symptoms include unsteadiness, confusion, nausea or worsening tremor.³
9. Coversyl reduces high blood pressure by blocking the conversion of angiotensin 1 to angiotensin 2 in the kidneys, thereby reducing vasoconstriction, sodium retention and aldosterone release.
10. A documented adverse affect from this medication is the increased risk of renal impairment. The impairment in renal function results in a decrease in Lithium excretion from the kidneys. This may result in Lithium toxicity. Therefore, when commencing the anti hypertensive ACE inhibitor Perindopril (Coversyl), the Lithium concentration and renal function are to be monitored.

Brief summary of events leading to death:

11. In January 2008, General Practitioner Dr Anu Achar prescribed Coversyl 5mg for hypertension. (A practice point in the July 2013 E book, Australian Medicines Handbook (AHM) notes renal function and electrolytes should be checked prior to commencing Perindopril (coversyl) and repeated one to two weeks later).

¹ The role of the Health and Medical Investigation Team (HMIT) is to assist the Coroner's investigation into the nature and extent of deaths, which occurred during the provision of healthcare, and identify potential system factors in healthcare related deaths. HMIT personnel comprise of practising Physicians and Clinical Research Nurses who draw on their medical, nursing and research experiences, skills and knowledge to independently evaluate clinical evidence for the investigation of reportable healthcare deaths and to assist in identifying remediable factors that may assist in prevention and risk management in health services settings

² The Coroners Prevention Unit is a specialist service for coroners created to strengthen their prevention role and provide them with professional assistance on issues pertaining to public health and safety.

³ Australian Medicines Handbook. E Book July 2013. Accessed 26 July 2013 at <http://www-amh-net-au>.

12. On 10 January 2008 the pathology requested and performed by Dorevitch did not include renal function. There is no record on the Dorevitch pathology request that Mrs Snopek was currently prescribed Lithium Carbonate. Therefore the testing of the renal function was not performed.
13. On 1 February 2008, Mrs Snopek was assessed by a Neurologist, Dr Raghav. Ms Bernadette Snopek reported her mothers recent onset of short term memory loss. Dr Raghav noted the medications Modecate and Lithium Carbonate and recent pathology results. Computerised Tomography of the brain indicated focal atrophy. Dr Raghav noted the recent onset of hypertension and commencement of antihypertensive medication. Dr Raghva concluded the cognitive decline was secondary to dementia, vascular or Alzheimer's, with a plan to perform a Magnetic Resonance Imaging (MRI). Dr Raghav suggested reducing the Modecate to improve symptoms of tremor and rigidity.
14. On 9 March 2008 Mrs Snopek was admitted to Dandenong Hospital after several falls at home and general deterioration. Blood tests revealed that her lithium level was elevated at 1.8mmol/l (normal level is 0.60-1.00mmol/l). Mrs Snopek also had some renal impairment and an elevated sodium level.
15. After being assessed by the medical registrar Mrs Snopek was admitted to the general ward for intravenous fluid administration. Referral was made to a toxicologist regarding the management of her elevated lithium level.
16. On 11 March 2008 at 9.00pm Mrs Snopek was admitted to the Intensive Care Unit for haemofiltration
17. On 13 March 2008, Mrs Snopek was discharged to the ward and lithium level was recorded at 0.5mmol/l.
18. On 14 March 2008, Mrs Snopek had ongoing deterioration and a Computed Tomography (CT) scan of the brain was performed and reported as being within normal limits.
19. On 15 March 2008, Mrs Snopek was febrile and her Glasgow Coma Score was 5/15 and a Medical Emergency Team (MET) call was made. The decision was made for palliative care.
20. On 18 March 2008, Mrs Snopek died at 11.15am.

Inquest and issues

21. When I convened an inquest on 8 July 2013 the Coroner's Assistant highlighted several issues⁴ including the following:
- the use of coversyl for high blood pressure whilst taking lithium given the combination of drugs is contraindicated and can lead to lithium retention and toxicity causing renal failure
 - the lithium testing by doctors at Doveton Clinic which amounted to only three occasions over many years
 - the ability of Mrs Snopek to understand and communicate with doctors at Doveton Clinic
22. Several witnesses gave evidence at the inquest but unfortunately Dr Achar was overseas and regrettably due to her inability to return earlier than planned it was not possible to reschedule the inquest for her to be heard. Dr Achar did however provide me with a statement answering various questions around the issues raised both before and during the inquest.⁵

The use of coversyl whilst taking lithium

23. Ms Bernadette Snopek told the inquest that at no point during the consultation in January with Dr Achar when her mother was given Coversyl was the term contraindicated raised or the fact that Mrs Snopek would need to be careful about her lithium levels. Ms Snopek described that the consultation discussion consisted of *"No, just take these tablets, it's a sample pack, come back in two weeks or whatever. And you know, and then review, yeah, see how it goes kind of thing."*⁶ Ms Snopek stated that during the course of the conversation with neurologist Dr Raghav she mentioned the fact that Mrs Snopek was on lithium. She stated that she *"went through her medications"* which included Lithium with Dr Raghav.⁷
24. Dr Doss told the inquest⁸ *"In my absence, in January and early February 2008, she was seen by my colleague and was found to have a high blood pressure and started on Coversyl*

⁴ Inquest Transcript pages 2-3

⁵ Statement of Dr Anu Achar, dated 22 November 2013

⁶ Inquest Transcript Page 16

⁷ Inquest Transcript Page 18

⁸ Inquest Transcript Page 37

5 milligram.”⁹ Dr Doss stated “Coversyl was started by colleague for high BP in January 2008 which is an ACE inhibitor, who didn’t realise the action between ACE inhibitor and Lithium.”¹⁰ He also went on to state “Coversyl is – comes in the – in the category of medication called ACE inhibitors. But ACE inhibitors are basically – they are – you have to be use it very cautiously with people on lithium – or should not be given at all.”¹¹ Dr Doss said it was only on 19 February 2008 after seeing her on 8 February.¹² after he came back that he became aware Mrs Snopek was taking Coversyl.

25. The obvious shortcomings in the Doveton Medical Centre computer system were conceded by Dr Gunawardana as the crucial warning about contraindication did not come up when the Coversyl was prescribed. Dr Gunawardana said that the computer system “very rarely” has all the relevant information the computer system.¹³
26. Dr Achar said in the statement dated 22 November 2013 that she “did not discuss the interaction between Lithium and Perindopril with Ms. Bernadette and Mrs. Snopek because at that stage [she] was not aware of any significant interaction between the two.”¹⁴ Dr Achar also stated that when she “prescribed the Coversyl on 4 February 2008 the Medical Director system did not give a warning in relation to the interaction because Lithium was not in the patient’s list of medications in the computer file.” Dr Achar conceded in her statement that she “forgot to put Lithium into the medication list on the system” as it “had only ever been generated in the past in handwriting and never manually added to the list.”

Lithium testing over time by the doctors at the Doveton Medical Clinic

27. Dr Doss told the inquest that during all the years “when she was on Lithium, she never showed sign of toxicity or adverse effects, and so lithium levels done on 3 occasions and blood test. All these tests showed within normal limits. Patient’s difficulty in attending pathology tests, due to home circumstances she was unable to comply with regular blood tests.”¹⁵ Dr Doss stated “The Lithium Levels were checked 3 times by me and the last one was done in 2003 and was in normal range. The test that was done last year revealed toxic

⁹ Inquest Transcript Page 25

¹⁰ Inquest Transcript Page 26

¹¹ Inquest Transcript Page 37

¹² Inquest Transcript Page 37

¹³ Inquest Transcript Page 68

¹⁴ Statement of Dr Anu Achar, 22 November 2013, Page 2

¹⁵ Inquest Transcript Page 26

levels, this was done after she was started on ACE inhibitors. I understand at that time she didn't have any signs of Renal Failure. I regret to say that the Lithium and other blood tests that were expected to be done more often were not done due to the patient's inability to go for the tests due to her domestic situation (requested by patient not to confront her husband)."¹⁶

28. Dr Achar's statement revealed that "[b]efore starting Coversyl [she] did intend to check the renal function and hence [she] ordered the blood tests. [She] did not do any specific test in regards to it's use with Lithium."¹⁷ Dr Achar conceded in her statement that she "agree[s] that Lithium levels should have been checked before starting treatment with an ACE inhibitor."¹⁸ Dr Achar also conceded that she "agree[s] that 6 weeks might be a bit long to wait to test a person who has been taking Lithium and has not been tested for many years"¹⁹ Dr Achar also agreed that "it would have been better to have base readings of Serum Lithium levels before giving Coversyl and then again after 2 to 4 weeks later."²⁰ She agreed that "this would allow [her] to change the Lithium script if necessary to avoid toxicity."²¹ Dr Achar stated that she "didn't specifically look to see whether [Mrs Snopek] had her serum lithium levels tested" and she "accidentally overlooked ordering testing for lithium levels."²²
29. Dr Bella Freeman who is a general practitioner of 27 years experience provided an expert opinion in relation to medical management of Mrs Snopek. In her statement she indicated, "It is usual to check urea and electrolyte levels 2-4 weeks after starting an ACE inhibitor, because occasionally, it can send patients, with no prior impairment of renal function into renal failure. Since Mrs Snopek was on Lithium, a repeat blood test, specifically testing urea, creatine and eGFR should have been arranged no later than the end of February 2008. It would appear no consideration was given to requesting a serum lithium level. I note that Dr Doss tells us that she had the blood levels assessed five years earlier. I think that is

¹⁶ Inquest Transcript Page 26

¹⁷ Statement of Dr Anu Achar, 22 November 2013, Page 2

¹⁸ Ibid.

¹⁹ Statement of Dr Anu Achar, 22 November 2013, Page 3

²⁰ Ibid.

²¹ Ibid.

²² Statement of Dr Anu Achar, 22 November 2013, Page 1

insufficient. I think annually at a minimum and with any change in medication would be sensible."²³

30. Although Dr Raghav told the inquest that had he been unaware Mrs Snopek was being prescribed both coversyl and lithium "*...I could have written a precaution to the GP about checking the lithium levels and kidney functions before commencing on coversyl...I would have notified the GP because it's not my domain.*"²⁴ and later on he stated "*Look, if – if I'm starting someone on ACE inhibitors, which is – Coversyl is one of the ACE inhibitors, anti – hypertensive's, then I check renal functions. But when I saw her, I was told that she was on – started on anti – hypertensive's because she had hypertension. So I had no knowledge what she was on and when she was being commenced on it.*"²⁵ Dr Freeman stated that Dr Raghav "*should have sought her Lithium levels*" at the consultation.
31. Dr Freeman criticised the Doveton Medical Clinic computer system and queried why the pharmacist did not call the Doveton Clinic to query the prescription of Coversyl while Lithium was also being prescribed. She described pharmacies as the "*final backstop*".²⁶
32. A statement from the dispensing 'Chemist Warehouse Dandenong' stated "*The usual practice of chemist warehouse Dandenong upon finding an interaction is to notify the prescriber of the interaction. If we dispense lithium and an ACE inhibitor to the same patient, we would normally contact the prescriber to notify that it is contraindicated. Also the pharmacist would warn the patient to watch for the signs of toxicity if the prescriber authorises the combination of drugs.*"²⁷

The ability of Mrs Snopek to understand and communicate

33. Ms Snopek told the inquest that her mother "*could speak English*" but was not "*strong at...communicating*"²⁸ In late December 2007 Ms Snopek described her mother as "*decidedly ... incapacitated with her confusion and things.*"²⁹

²³ Statement of Dr Bella Freeman, Page 17 Inquest Brief

²⁴ Inquest Transcript Page 82

²⁵ Inquest Transcript Page 86

²⁶ Inquest Transcript Page 102

²⁷ refer letter dated 28 September 2012 on coronial brief

²⁸ Inquest Transcript Page 6

²⁹ Inquest Transcript Page 14

Conclusions

34. Dr Doss told the inquest that Mrs Snopek had Lithium levels performed on only three occasions, which were within normal limits. He apparently believed Mrs Snopek was unable to attend the Doveton Medical Centre for regular pathology testing of Lithium levels due to her 'home circumstances' however I had difficulty in accepting what he had to say in that regard. In other evidence Dr Achar stated Mrs Snopek was administered regular injections of Modecate which seemed to further cast doubt on Dr Doss' reasoning and rationale for failing to continue any lithium testing.
35. There were historic deficiencies in the failure to regularly monitor Mrs Snopek's lithium levels. Dr Doss should have ensured that the appropriate lithium monitoring and testing occurred but he did not.
36. I was surprised that Mrs Snopek could be prescribed coversyl by Dr Achar relatively quickly on the basis of such limited testing and with such a lack of awareness of the potential repercussions of prescribing the contraindicated coversyl when taking lithium.
37. Whilst conceding that I did not have the benefit of hearing direct evidence from Dr Achar, she was well aware of the issues and concerns and her post inquest statement revealed obvious deficiencies in her medical management and treatment.
38. There was a conflict in the evidence of Ms Snopek and Dr Raghav but it seemed a bit far fetched for him to claim that the issue around Mrs Snopek's medications and the clear contraindication, was somehow beyond his specialty.
39. It was apparent that certain doctors at Doveton Medical Clinic were still using handwritten notes in files as opposed to the computer system and if there was no transfer of this information it was not reasonable for them to be relying on the Medical Director system as a prudent check for contraindicated medications and prescriptions. The doctors working at the Doveton Medical Centre had failed to engage with the computerised system.
40. The failures in recording important patient information at the Centre highlighted the importance of a system for general medical practice to ensure all their patient health information is available and accessible when needed.
41. Although I was unable to ascertain whether and what communication may have occurred between Chemist Warehouse Dandenong and Doveton Medical Centre it was apparent that pharmacies need to be vigilant and maintain meticulous records particularly about advice to

prescribing doctors and recipient patients when dispensing patently contraindicated medications.

Findings

Having considered all the material and evidence I find that Mrs Snoppek unfortunately died from Lithium Toxicity in the circumstances set out in this finding.

Comments

Pursuant to section 67(3) of the **Coroners Act 2008**, I make the following comment(s) connected with the death:

The risks associated with hybrid systems of recording important patient health information have been the subject of a previous coronial finding of mine that included some recommendations.³⁰ The risks, as well as counter-measures to manage them are addressed in the Royal Australian College of General Practitioners *Standards for General Practice* (4th edition):

“There are potential risks associated with hybrid patient health record systems, where some information is recorded on a computer (e.g. medicines list) and some information on paper notes (e.g. past medical history). When the patient notes are stored in two areas it is possible for important issues to be overlooked, particularly if another doctor sees the patient. To make this less of a problem, a note in each system improves the continuity of these hybrid systems.

If health information about a patient is kept in two sites (as in the case of hybrid records or records held in a residential aged care facility), practices need to ensure all the information is available and accessible when needed.

In the interests of risk management, the RACGP recommends that practices with hybrid patient health record systems work toward the electronic recording of at least allergies and medications.”³¹

³⁰ refer Finding into the Death of Cora Day case no.1364 /01

³¹ Royal Australian College of General Practitioners. *Standards for General Practice. Criterion 1.7:1 Patient Health Records. (4th Edition)* Published May 2013. Accessed via <www.racgp.com.au>.

Recommendations

Pursuant to section 72(2) of the **Coroners Act 2008**, I make the following recommendations connected with the death

1. To improve the safety of patients who attend the Doveton Medical Centre regular audits are to be undertaken to ensure each patient attending the Doveton Medical Centre has a legible individual health record, and the health record complies with the Royal College of General Practitioner Standards for General Practice.
2. To improve the safety of patients who attend the Doveton Medical Centre, the Doveton Medical Centre should record all allergies and medications electronically.

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

The Family of Margareta Snopek
Interested Parties

Signature:



HEATHER SPOONER
CORONER
Date: 5 February 2014

