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CORONIAL COMMUNIQUÉ

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PUBLICATION TEAM

Editor in Chief: Adam O'Brien
Consultant Editor: Joe Ibrahim
Managing Editor: Zoë Davies
Designer: Caroline Rosenberg

Address: Clinical Liaison Service
Coronial Services Centre
57-83 Kavanagh St
Southbank 3006
Telephone: +61 3 9684 4364

FREE SUBSCRIPTION

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EDITORIAL

Welcome to the first edition of the Coronial Communiqué for 2007.

The Clinical Liaison Service has now been in operation for over four years and has reviewed over 1,800 cases of healthcare deaths reported to the Victorian State Coroner's Office in that time. As well as completing a structured review of all these hospital deaths, the CLS has worked hard to communicate the lessons learned from these deaths to the Victorian healthcare community.

2006 was a busy year - the Clinical Liaison Service regularly hosted education sessions and presented to hospitals and students in an effort to spread the patient safety message from the Coroner's perspective. The staff of the CLS have presented to over 800 healthcare professionals in 11 different forums in the last 12 months alone. We have hosted one international and two national delegations of healthcare professionals wanting to understand how the CLS Specialist Investigation model works. We have attended three patient safety conferences and produced four copies of the Coronial Communiqué.

2007 is shaping up to be another very busy year. We have committed to produce a further investigative standard, similar to those developed by the CLS in previous years for the investigation of fall-related deaths in hospitals and the investigation of deaths relating to the miscommunication of radiology findings. We are hosting another international delegation of visitors from Japan in March and are still working on the project to develop a technological version of the Medical Deposition that can be completed on-line, uploaded to the State Coroner's Office, and ultimately used to produce feedback reports to the hospitals. All of this work is on top of reviewing hospital deaths and producing four Coronial Communiqués!

We are also running a survey to evaluate the Coronial Communiqué and will be sending invitations to subscribers in the next two weeks. If you receive an invitation, please respond and give us your views so that we can continue to produce what we hope is a quality and informative publication.

The first case (1004/03) in this edition highlights the importance of considering alternative diagnoses in those presenting with similar problems on multiple occasions, as well as the imperative of being aware of local public health risks. Case number 2234/04 describes the management of a patient in an extremely busy emergency department. Appropriate systems were later introduced by the hospital. The final summary (60/05) is a fascinating case that considers two important issues; the impact on patients of erratic behaviour of other patients and the complexities of deciding when a patient is 'not for resuscitation'.

FEEDBACK

The CLS team is keen to receive feedback about this communication especially in relation to changes in clinical practice.

Please email your comments, questions and suggestions to: **cls@vifm.org**

REPRODUCTION

If referring to this publication, the following citation should be used: Coronial Communiqué [electronic resource]: Clinical Liaison Service, Connecting Clinicians with Coroners. Southbank, Vic. State Coroners Office; Victorian Institute of Forensic Medicine. Available at: **http://www.vifm.org/communique.html**

All publications produced by the Specialist Investigations Unit, including the Residential Aged Care Coronial Communiqué and the original Coronial Communiqué can be found on our website at **http://www.vifm.org/n962.html**

RANZCOG PROSTIN GUIDELINES

Case Number 1765/03 [presented in the May 2006 issue of the Coronial Communiqué instigated a number of interested and interesting responses. It involved foetal distress following unexpected labour after the insertion of Prostin. The Coroner recommended that all patients in whom Prostin was used should be admitted for observation. We are pleased to advise that the Royal Australian and New Zealand College of Obstetrics and Gynaecology have developed a guideline that will be of assistance to obstetric services when developing their own protocols for such cases. Link: **http://www.ranzcog.edu.au/publications/collegestatements.shtml** (see "C-Obs 12")

HOW DANGEROUS CAN SHOWERING BE?

CASE NUMBER: 1004/03
Case Precis Author: Adam O'Brien FACEM

CLINICAL SUMMARY

A 20 year old female lived with her grandparents in a housing commission estate completed in 1976. She liked having long showers with the doors and windows closed. However, after 2001 she began to feel dizzy, develop headaches and lose consciousness in the shower.

In July 2002, after losing consciousness for about two hours in the shower, she was taken to the local hospital after she had recovered enough to phone the ambulance. She had five spells of light-headedness in the last four months after showering. On this occasion, she experienced light-headedness and a racing heart before losing consciousness. She also exhibited dry pink skin on her leg and abdomen. She had a chest x-ray, CT brain and routine blood and urine tests, and was discharged.

Over the next two weeks she consulted her general practitioner and was referred for an EEG, cardiac monitoring and to a neurologist who believed the problem was syncope or fainting. She continued to have dizzy spells and headaches when she showered.

During March 2003 the deceased's grandmother returned home and found her unresponsive in the shower following which she was unable to be resuscitated.

PATHOLOGY

An autopsy at VIFM determined the cause of death was carbon monoxide poisoning. Toxicological analysis found a blood carboxyhaemoglobin saturation of 72%. Levels that exceed 50% are considered as life threatening.

CORONIAL INVESTIGATION

The original instantaneous, internal, natural gas hot water system was placed in the toilet which was separated from the shower room and the laundry by sliding doors. There was no fixed ventilation or extractor fan in any of the rooms. The only permanent ventilation in the toilet and bathroom was through plaster ceiling vents. A window in the bathroom could be opened as required.

Inspection of the hot water system found the flue was heavily blocked by birds' nests and that the ceiling vent was blocked with insulation. Consequently there was a very rapid build up of carbon monoxide to dangerous levels in the bathroom when the hot water system was operating.

The Office of Gas Safety considered that many cases of carbon monoxide poisoning had not been accurately diagnosed.

An expert stated that the symptoms of carbon monoxide poisoning were varied and non-specific and that the 'cherry-red' indicator was rarely seen. The deceased's reported symptoms were suggestive of syncope and could be explained by the vasodilatory effect of a hot shower. Alternatively, their recurrence over a period of time could have indicated a neurological problem. Although the carbon monoxide levels can be measured with a blood test, it was not a routine test.

CORONER'S COMMENTS

The Office of Gas Safety believed that there were 57,479 potentially vulnerable properties sold by the Office of Housing to private owners. Letters sent to the owners alerted them to the dangers of internal gas water heaters and offered financial assistance with replacement of these units with external hot water systems. This process is ongoing.

This case was one of a five known accidental deaths caused by carbon monoxide toxicity. The Office of Gas Safety is also aware of three or four "near-misses" in recent years.

CORONER'S RECOMMENDATIONS

1. The eradication program be maintained for instantaneous, internal, natural gas hot water services that remain in properties built by Housing Commission Victoria; and
2. The Office of Gas Safety collaborate with medical, nursing and allied health professional bodies to develop and distribute a specific education program which raises awareness of the dwellings which are most likely to be associated with carbon monoxide toxicity.

DELAYED DIAGNOSIS OF GASTROINTESTINAL BLEEDING

CASE NUMBER: 2234/04
Case Precis Author: Janet Pugh
Peninsula Health

CLINICAL SUMMARY

Mr B was an 80 year old man with diabetes who presented via ambulance to an Emergency Department (ED) at 13:10h with a 2 day history of reduced oral intake, fever and general malaise. He had received one litre of Hartman's fluid by the Metropolitan Ambulance Service for his tachycardia and hypotension. At 13:30h he was reviewed by the ED doctor and possible sepsis, dehydration and unstable diabetes were considered as causes for Mr B's presentation. His observations included a BP of 108/70 mmHg and a heart rate of 93 bpm in atrial fibrillation. Blood was sent to pathology for testing. A venous blood gas was performed and analysed in the ED, with the results available via printout at 13:44h. His blood glucose was noted to be 15.6mmol/L and his pH to be 7.34. The printout also noted the haemoglobin (Hb) to be 66g/L. This low Hb appeared not to have been noted nor acted on by nursing or medical staff. At 14:00h his BP was 118/49 mmHg. At 15:10h it dropped to 83/54 mmHg and the blood sugar went up to 20.6mmol/L. At 15:35h actrapid insulin was given.

At 16:00h Mr B became increasingly agitated and was reviewed by the ED doctor who prescribed haloperidol at 16:10h. Another dose was given for further agitation at 16:30h. Shortly afterwards a rectal examination was performed that revealed melena stools. Coincidentally the results of the blood tests taken at 13:30h were telephoned to the ED at about 16:30h indicating the dramatically reduced Hb of 68g/L. The patient subsequently received 4 units of blood, further intravenous fluids and was taken to theatre at 18:00h for an endoscopy which was subsequently abandoned due to continued bleeding and unstable blood pressure. Discussions were held with the family regarding resuscitation and Mr B died at 19:18h with his family in attendance. The original printout of the Hb was later found on the floor of the ED cubicle.

PATHOLOGY

A full autopsy determined the cause of death to be a cardiac arrest in a man with cardiomegaly, ischaemic coronary artery disease and evidence of an acute upper gastrointestinal tract haemorrhage.

CORONIAL INVESTIGATION

At inquest, the Coroner heard that in response to the death of Mr B the hospital introduced the following changes to their ED protocols:

1. Medical and nursing staff were now required to physically check off each result on a blood gas analysis printout, with either the ED Admitting Officer or with a consultant on duty;
2. In cases of suspected gastrointestinal bleeding, a member of the gastrointestinal team must be notified immediately when a patient presents with melena; and
3. Communication between ED and pathology regarding blood analysis results on weekends has improved with results now available in one hour rather than three hours.

CORONER'S COMMENTS

Mr B was not correctly diagnosed until 3½ hours after the initial presentation to the ED. The hospital conceded that the diagnosis should have been made once the blood gas analysis results were available. A sincere apology by the hospital was made to the family at the inquest hearing.

CORONER'S RECOMMENDATIONS

No recommendations were made by the Coroner as the hospital had introduced several changes to their ED protocols

RECENTLY CLOSED CASES

336/99: A middle aged male with myelodysplasia developed a large pleural effusion and a fever following a bone marrow transplant. During a second pleurocentesis (to relieve the effusion) an intercostal artery was perforated resulting in a massive haemothorax, rapid deterioration to multi-organ system failure, and subsequent death.

10/2003: A young adult male died of combined drug toxicity. He had a history of abusing multiple substances, but of particular note was the drug Artane – an anticholinergic drug – which has come to prominence in recent years as a commonly abused drug in psychiatric patients. The coroner wanted to raise awareness of this relatively new issue amongst the medical community.

2213/03: A young adult female with haemolytic uraemic syndrome with irreversible renal and cerebrovascular disease requiring haemodialysis four times a day developed abdominal pain and was being transferred to a larger hospital for management of pancreatitis when she developed cerebral hypoxic damage and subsequently died. Several recommendations related to communication with the ambulance service regarding transportation requests were made.

4009/04: A elderly male undergoing an elective endovascular repair of a common iliac artery aneurysm sustained a complication which resulted in conversion to an open surgical procedure. His extended stay on the operating table resulted in rhabdomyolysis and renal failure and he died of multi-system failure three days later.

4369/04: The mother of this baby was admitted and monitored for pre-eclampsia at 35 weeks gestation. Two days later, a placental abruption was diagnosed late at night. An emergency LUSCS was conducted within 35 minutes and the baby resuscitated but died two days later due to cerebral anoxia.

117/05: A teenage female was admitted as an involuntary psychiatric patient at high risk of suicide, hanged herself whilst on weekend leave staying with her family.

NFR CONFUSION

CASE NUMBER: 60/05
Case Precis Author: Marianne Beaty QaRM Group

CLINICAL SUMMARY

A 94 year old female was admitted to a metropolitan public hospital with acute pulmonary oedema and a raised troponin level. She had a past history which included AF, CCF and hypertension. She responded well to treatment. Ten days later there was an unwitnessed incident involving the deceased in which she claimed that the patient in the neighbouring bed pushed her into the bed. The deceased became very distressed and apprehensive, requiring oxygen and a sedative. About 90 minutes later the patient with dementia was removed from the room. Thirty minutes later the deceased collapsed and was unresponsive, following which a MET call was made. The responding team found "Not for Resuscitation" (NFR) orders in the patient's records and so only made minimal resuscitative efforts before pronouncing her dead.

PATHOLOGY

A full autopsy was conducted at the VIFM which identified significant coronary artery atherosclerosis as the cause of death.

CORONIAL INVESTIGATION

Cardiac experts could not assert that the incident did NOT cause the woman's death so the Coroner investigated the circumstances leading up to the incident. The Director of Medical Services stated that the patient was being treated for severe medical conditions so care on a medical ward was appropriate. The Director of Nursing (DON) explained that the ward was full and very busy on the day of the incident and that it occurred whilst half the staff were on a meal break. The Coroner questioned the risk reduction plans for dealing with patients with behaviour of concern. The DON explained that this patient had never been aggressive in the past and so there were no strategies in place to deal with this. The family stated that the patient's aggression level had been building for over 90 minutes leading up to the incident and when reported to the staff, this information had been ignored.

The Coroner then focused on the NFR order. A notation had been placed in the patient's history stating NFR. The notation stated that the order was obtained "after extensive discussion with the family", although there was no note indicating that consent had been obtained and the family denied being consulted right up until the time of the inquest. All medical staff consulted during the inquest agreed that an NFR order was appropriate. The Coroner considered that by finding that the doctor had decided to order the NFR the family would likely be relieved of the onerous burden of feeling that they may have contributed to the death by agreeing to it. The hospital showed the Coroner their newly developed policy on NFR orders.

CORONER'S COMMENTS

The Coroner commended the hospital on the NFR document but recommended that medical staff ensure that consultation with the family occurs in relation to any decisions made, and that wherever possible, the NFR orders are discussed with the patient at a time when they are capable of making an informed decision.

CORONIAL RECOMMENDATIONS

Hospitals which do not already have such an NFR policy, procedure or guideline, introduce a formal documented protocol relating to Not For Resuscitation.

AUTHOR'S COMMENTS

Health care staff need to involve the relatives in the patient's care, particularly the elderly. Each Health Service SHOULD have a policy on NFR orders and take great care to carefully document the process by which the decision to implement an NFR order was made. Where the decision is made by medical staff, this fact should also be communicated to the family.

RECENTLY CLOSED CASES CONTINUED

242/05: An elderly female with COPD and multiple co-morbidities developed an empyema and required insertion of an intercostal catheter. This was performed by a very senior and experienced doctor but still resulted in major complications that resulted in her death.

1038/05: An elderly nursing home resident suddenly collapsed and was transferred to ED where she was found to have hypoglycaemia and aspiration pneumonia. With no history of diabetes there was no reason for her blood sugar to fall so low. With no response to treatment she was made "NFR" and died six days later. No cause of death was ascertained.

2322/05: A young adult male hanged himself after multiple attempts to obtain psychiatric treatment for what he felt was depression and suicidal ideation. The coroner recommended that the local area mental health service conduct education sessions with the local police in an effort to improve working relations.

4194/05: A young adult male diagnosed with schizo-affective disorder was on a community treatment order (CTO) and was living with his grandmother who also suffered from schizophrenia. When his relatives went overseas the patient stabbed himself in the chest and died from this injury.

688/06: A middle aged stressed and depressed male general practitioner committed suicide by shooting himself. A suicide note was left for the family who went and found his body and reported it to the police.

All cases that are discussed in the Coronial Communiqué are public documents. A document becomes public once the coronial investigation process has been completed and the case is closed. We have made every attempt to ensure that individual clinicians and hospitals are de-identified. However, if you would like to examine the case in greater detail, we have also provided the coronial case number.