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CORONIAL COMMUNIQUÉ

Clinical Liaison Service – Connecting Clinicians with Coroners

State Coroner's Office and Victorian Institute of Forensic Medicine (Monash University, Department of Forensic Medicine)

December 2003: Volume 1, Number 1

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Future Issues

We expect to publish four issues of the Coronial Communiqué each year and at present publication will be restricted to an electronic format only.

If you are interested in subscribing to the Coronial Communiqué please contact the editorial office with your preferred e-mail address.

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Welcome!

Welcome to the first Coronial Communiqué prepared by the Clinical Liaison Service! The Clinical Liaison Service is a unique initiative of the Victorian State Coroner's Office and the Victorian Institute of Forensic Medicine in a bold attempt to improve patient safety.

The need to establish this service is supported by an expanding body of research that indicates that addressing underlying systems failures may prevent a significant proportion of adverse events. Indeed, a recent legislative review in England has recommended the creation of a similar body in their own coronial jurisdiction to that of the Clinical Liaison Service.

About this Communiqué...

This Communiqué highlights selected cases that the Clinical Liaison Service has reviewed after they have been reported to the State Coroner's Office.

Our primary aim is to improve the awareness of clinicians and those in positions of governance about adverse events resulting from systems failures, and then to apply these lessons to their own institutions.

A secondary aim is to improve healthcare organisations' understanding of the coronial system and the work performed by the Clinical Liaison Service.

We encourage all recipients of this communiqué to forward it to other interested healthcare professionals and to print copies for distribution and display.

All cases that will be discussed are public documents. A document becomes public once the coronial investigation process has been completed and the case is closed. Furthermore, every attempt has been made to de-identify individual clinicians and hospitals, as they are not necessary for the exploration of limitations in our health systems. The coronial case number will be stated for those who would like to examine the case in greater detail.

Featured Case
Consultant Cover or Not?

Case Number: *2350/01*
Case Precis Author: *AJ O'Brien*

Clinical Summary

A 43-year-old male presented to the emergency department of a busy peripheral metropolitan hospital complaining of significant abdominal pain. Following assessment by the emergency medical staff, he was reviewed by the on-call surgical registrar. After a series of tests, the provisional diagnosis was peptic ulcer disease. A gastroscope was performed two days after admission which revealed severe gastritis and three acute gastric ulcers.

Despite being prescribed regular analgesia and a proton pump inhibitor his pain persisted. He required twenty-nine doses of pethidine and four doses of morphine.

He had a cardiac arrest on the fifth day after admission and died the following day.

The patient had been reviewed once by the surgeon during a routine ward round two days after his admission. The surgeon was not consulted again until after the cardiac arrest. The patient had multiple reviews by surgical registrars and residents.

Coronial Investigation

Background

The death was reported to the Victorian State Coroner's Office. An autopsy established the cause of death as small bowel ischaemia resulting from an internal hernia. Ischaemic heart disease was considered to be a significant contributing factor.

Statements were taken from medical and nursing staff. Two independent expert opinions were obtained from a gastroenterologist and a cardiologist.

A preliminary hearing was held during which the presiding Coroner asked the hospital if it was willing to concede any deficiencies. The hospital acknowledged that:

- There was inadequate communication between the surgical registrar and surgeon regarding the patient's medical condition;
- The communication deficiencies resulted in poor continuity of care;
- There were no formal written guidelines identifying the circumstances in which junior medical officers should contact the admitting consultant, merely verbal advice that it should take place if the junior doctor was concerned.

The Inquest

The experts gave the following evidence:

- The persisting severe abdominal pain and vomiting post-gastroscopy could not reasonably be explained by the gastroscopy findings;
- Senior medical staff should have been called to see the patient;
- "An urgent laparotomy was indicated within 3 to 4 days of his admission. He had severe abdominal pain, persisting vomiting, a toxic blood film and lactic acidosis - this combination strongly suggests ischaemic and obstructed intestine".

The hospital submitted that the patient died due to either:

- Bowel ischaemia resulting from obstructed bowel;
- The unknown severe cardiovascular disease; or
- A combination of bowel ischaemia and cardiovascular disease.

It was argued that the possible causes of death were natural and that the treating doctors therefore could not be said to have caused the death. It was considered that this argument had a rather simple logical progression but that its acceptance would render medical mismanagement in many cases meaningless, being a matter of theoretical interest only.

The surgeon acknowledged that he was in charge of the deceased's care, with the registrar being responsible for the day to day provision of medical care and treatment.

The counsel for the next of kin submitted that an incorrect diagnosis by hospital doctors resulted in deficiencies in care and treatment, and that the failure to perform a laparotomy was the cause of the patient's death.

Findings

The Coroner's findings included:

- The misdiagnosis at the outset seemed to be self perpetuating thereafter;
- The provision of appropriate day to day medical management was the responsibility of registrars under the supervision and direction of the surgeon;
- The breakdown in communication between junior and senior medical staff resulted from inadequate systems;
- No adverse finding was made against the surgeon.

Hospital's Response

The hospital created a set of criteria for which made it mandatory for the hospital medical officers must contact a consultant. These included the following:

1. Unexpected deterioration in the condition of the patient;
2. The delivery of excessive amounts of analgesia to the patient having regard to the working diagnosis;
3. Unexplained electrolyte imbalance or sepsis in the patient;
4. Drug interaction in relation to medication administered to the patient;
5. Unexplained development of tachycardia or pyrexia in the patient;
6. Unexplained fall in haemoglobin *(addendum)*.

While this list was promulgated for all medical and surgical cases within the hospital, other specialties developed *additional* discipline-specific criteria, in the specialities of obstetrics and gynaecology and aged care medicine. Additionally, the hospital introduced a system out of hours where hospital medical officers involved in the treatment and management of a patient were required to document patient problem lists with actions undertaken for each of them. This recorded information was then formally handed over to the on-coming medical officer involved in the patient's care. This will ensure that there is a regimented system in place for documenting important patient details at shift hand-overs.

The Challenge of Triage

Case Number: *1829/02*
Case Precis Author: *A Charles*

Clinical Summary

A previously well 18-year-old male presented to a peripheral suburban emergency department in the early hours of the morning with a 24 hour history of being generally unwell with lethargy, headache and vomiting. He was triaged as a category four.

After waiting for approximately four hours later he "felt a bit better" so left without being assessed by a medical practitioner. He had, however, been reviewed by the triage nurse on three separate occasions.

Five hours after arriving home he was found by his family to be agitated with an altered conscious state and to be developing a purpuric rash. He was returned to the same emergency department by ambulance where advanced life support was commenced, including endotracheal intubation and ventilation. He was thereafter transferred to a tertiary hospital Intensive Care Unit. Meningococcal septicaemia was diagnosed and despite aggressive treatment he deteriorated and died 4 days later.

Coronial Investigation

The issues raised by the patient's family were: 1) a perceived deficiency in the triage process and 2) the delay in being seen by a doctor during the first presentation.

Coronial Findings

The Coroner found that the emergency department was particularly busy on the evening that the patient first presented.

The triage nurse's assessment of the patient indicated a non-specific flu like symptoms and therefore an appropriate triage category allocation had been given. Neck stiffness and photophobia had been examined for.

The delay in the patient being seen could not be definitively connected to his death.

Recommendation

The Coroner recommended that consideration be given to formalising a process where a patient is always reassessed by the triage nurse once the triage time has expired. In this case that would mean a formal nurse review one hour after initial assessment. It was noted that this was in fact performed informally on three occasions in this case.

Hospital Response

The hospital reviewed its triage processes and procedures and concluded that any patient who presented with similar symptoms should be triaged as a category three (to be seen within 30 minutes of presentation).

Relevant website

Australasian College for Emergency Medicine
http://www.acem.org.au/open/documents/triage.htm

A Frequently Asked Question!

How do I find out about what is happening after a death has been reported to the State Coroner's Office?

All the deaths reported to the State Coroner's Office are assigned a case number and the investigation process is coordinated by a police officer from the State Coroner's Assistants Unit (SCAU). To obtain information about a reported death in a timely and efficient manner keep a record of the assigned case number and ask for the State Coroner's Assistants Unit when contacting the Coroner's Office. Ideally, each Health Care Organisation could nominate one person to liaise between the SCAU and the interested members of staff at the Health Care Organisation.

The State Coroner's Office automatically contacts the persons who are considered to be an 'interested party' in every case of a reported death. Most health professionals who participated in the clinical care of a deceased patient are curious and eager to learn the outcomes of a Coroner's investigation to improve their knowledge and professional development. However, this professional interest does not equate to the legal interpretation of an 'interested party.'

At the conclusion of death investigation a copy of the Coroner's Findings and Recommendations is sent to the

Health Care Organisation that reports a patient's death. The State Coroner's Office assumes the Health Care Organisation will circulate the Coroner's Findings and Recommendations to their staff.

Quote

"IT IS A CAPITAL MISTAKE MY DEAR WATSON TO THEORISE BEFORE ONE HAS DATA."

Sherlock Holmes

How Much Antivenom Should We Stock?

Case Number: *476/03*
Case Precis Author: *L Baker*

Clinical Summary

An elderly female who lived alone was bitten by a tiger snake whilst working in the garden. She sucked the venom from the bite site and then had a shower prior to telephoning for assistance. Before making the call she collapsed and became unconscious for approximately two hours. When she regained consciousness she called the ambulance who applied a pressure bandage and transported her to a medium sized centrally located metropolitan emergency department.

On arrival she was drowsy with a Glasgow Coma Score (GCS) of 14/15. Soon after presentation her urine was tested using a Venom Detection Kit (VDK). Shortly afterwards she became drowsier and her right pupil became dilated. An infusion of antivenom was immediately commenced and she needed to be intubated and ventilated. A CT of her brain showed intracranial haemorrhages. She had also developed a severe coagulopathy with an International Normalised Ratio (INR) of greater than nine in addition to other evidence of disseminated intravascular coagulopathy. Her coagulation profile normalized twelve hours after admission in response to fourteen ampoules of antivenom and six units of fresh frozen plasma. A repeat CT of her brain 48 hours later showed progression of the haemorrhages. Death occurred in the Intensive Care Unit (ICU) four days later. An autopsy performed at the Victorian Institute of Forensic Medicine confirmed that she died from cerebral haemorrhages secondary to a tiger snake bite.

Coronial Investigation

Enquiries from the State Coroner's Office were concentrated on the stocking of antivenom in the hospital.

Hospital Response

It was noted that obtaining additional ampoules of antivenom proved more problematic than anticipated.

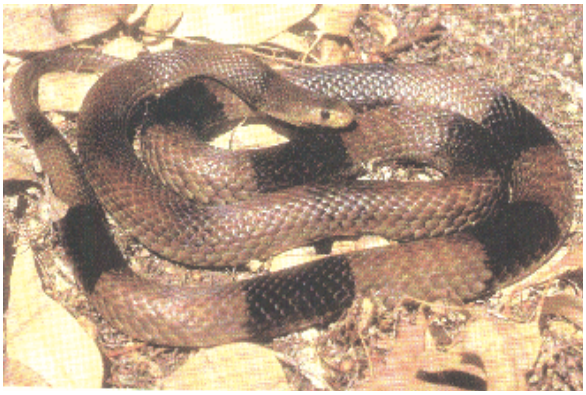
A survey by the concerned hospital revealed that most metropolitan hospitals stocked one or two ampoules of antivenom in accordance with the previous teachings of Dr Straun Sutherlanda (a widely published expert on envenomation).

Comments

Following this case, the hospital increased its stock from one to five ampoules each of tiger and brown snake antivenom, despite snake bites being a rare presenting problem.

Dr Struan Sutherland taught that one ampoule each of tiger and brown snake antivenom should be stocked in each hospital, as one ampoule was usually sufficient to neutralise the effects of envenomation. Dr Sutherland stated that once the type of snake has been determined using the VDK, the specific antivenom could be commenced and then if necessary more ampoules obtained from the Commonwealth Serum Laboratory (CSL) or nearby major hospitals. As published on the The Australian Venom Research Unit's (AVRU) website, it is now suggested that metropolitan hospitals should stock four ampoules of antivenom for each type of locally occurring snake and that smaller centres should stock enough antivenom to manage one bite, unless the incidence of snakebite is unusually high in that area. Interestingly, we are unaware of AVRU issuing formalised guidelines for management of snake envenomation nor for quantities of antivenom to be kept in stock in hospitals. AVRU's website address is:

http://www.pharmacology.unimelb.edu.au/avruweb/index.htm



If you only have time to visit one website, we recommend...

The Agency for Healthcare Research and Quality: http://www.ahcpr.gov
Click on the WebM&M link for Morbidity & Mortality Rounds Online

Thank you!

This inaugural issue is kindly being distributed through the Australian Resource Centre for Hospital Innovations (ARCHI) and the Victorian Quality and Risk Managers Group. We wish to thank them for their generosity!

Tell us what you think

The Clinical Liaison Service is keen to receive feedback about the Coronial Communiqué. Please email your comments and questions to: staceye@vifm.org