



We speak for the dead to protect the living

SIXTEENTH ANNUAL REPORT
OF THE
GERIATRIC AND LONG TERM CARE
REVIEW COMMITTEE
TO THE CHIEF CORONER
FOR THE PROVINCE OF ONTARIO

JUNE 2006

Chairperson: Dr. Peter A. Clark
Regional Supervising Coroner
North East Region

**Sixteenth Annual Report of the Geriatric/Long Term Care Review
Committee to the Chief Coroner for the Province of Ontario – June 2006**

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INTRODUCTION

Originally formed in December 1989, the Geriatric/Long Term Care Review Committee to the Chief Coroner for the Province of Ontario has just completed its sixteenth full year of operation.

The current Committee membership is as follows:

Dr. Sid Feldman	Family Physician
Dr. Margaret Found	Family Physician/Coroner
Dr. Lynne Fulton	Emergency Room Physician
Dr. Barry Goldlist	Geriatrician
Dr. Michael Gordon	Geriatrician
Dr. Jennifer Ingram	Geriatrician
Dr. Heather MacDonald	Geriatrician
Dr. A. E. Lauwers	Emergency Room Physician
Ms. Joy Richards	Registered Nurse
Ms. Marsha Rosen	Registered Dietician
Dr. Jim Ruderman	Family Physician
Dr. Peter Clark	Regional Supervising Coroner

When indicated, health care professionals from other disciplines (i.e. psychogeriatrics, gastroenterology, infectious diseases) have assisted the Committee with case reviews.

METHODOLOGY

In 2005, cases were referred to the Committee from a variety of sources including local coroners, Regional Supervising Coroners, and the Office of the Chief Coroner. In previous years, cases were also referred by advocacy groups and long term care institutions.

The Committee conducts an independent review of the available records relevant to the specific case and then prepares a final report including recommendations where indicated, to be sent back to the local community for discussion and implementation with the aim being to prevent future deaths in similar circumstances.

COMMITTEE ACTIVITIES 2005

The Committee conducted 28 reviews in 2005. Yearly case review statistics for the past 10 years are included in the table below.

YEAR	NUMBER OF CASES REVIEWED	TOTAL NUMBER OF DEATHS	NUMBER OF CLUSTER INVESTIGATIONS WITH (NUMBER OF DEATHS)
1996	19	19	0
1997	20	20	0
1998	18	18	0
1999	15	15	0
2000	20	25	1(6)
2001	30	30	0
2002	21	21	0
2003	17	17	0
2004	25	38	HOMICIDE REVIEW
2005	28	28	0

Committee members participated in the following activities in 2004:

- (1) Regular monthly meetings as required,
- (2) Regional Coroner's Reviews,
- (3) Liaised with:
 - Individuals,
 - Government Ministries
 - Acute and chronic care general and psychiatric hospitals,
 - Public health departments,
 - Private industry long term care facilities,
 - Medical and nursing associations,

- Advocacy groups,
 - Ontario and American Coroners and Medical Examiners
 - The Chief Coroners of the other Canadian Provinces and Territories,
 - Long term care associations and institutions throughout Canada,
 - The International Association of Coroners and Medical Examiners,
 - and
 - Various professional gerontological associations,
- (4) Provided independent expert evidence at an Inquest

RECOMMENDATIONS

PREAMBLE

The **Recommendations Section** contains a number of general recommendations which, in the Committee's mind, should be widely circulated throughout the Province to all interested individuals, facilities, ministries, agencies, special interest groups, health care professionals and their licensing bodies, all provincial coroners, the Chief Coroners and Medical Examiners of the other Canadian Provinces and Territories, and any other individual and/or group on request.

It should be noted that the recommendations are just that, recommendations. They have been formulated based on the specific circumstances of the 28 cases (28 deaths) reviewed by the Committee, cases referred because of perceived problems identified by the referring person, institution, or agency.

The Committee is aware that quality long term care does exist in Ontario and that the deaths reviewed represent only a small portion of the total number of deaths of the elderly and residents of long term care institutions investigated by coroners.

**THE RECOMMENDATIONS ARE INTENDED TO PROMOTE DISCUSSION
AND SHOULD NOT BE INTERPRETED AS POLICY DIRECTIVES FROM ANY
AGENCY OR MINISTRY OF GOVERNMENT INCLUDING THE OFFICE OF
THE CHIEF CORONER**

The second part of the **Recommendations Section** includes seven case reviews. The case reviews selected for inclusion in this year's annual report are excellent examples of some of the issues that health care professionals encounter in present day Ontario. The Committee is of the opinion that, not only will the health care readership be able to recognize the potential for the occurrence of similar situations within their local communities, but also the readership will gain an understanding of how the Committee collectively thinks and develops recommendations that are directed towards the prevention of future deaths in similar circumstances.

Included in this year's Annual Report is a review of a double homicide that occurred in 2001 and was reviewed by the Committee in 2002. The review was not previously published as the incident was before the court and subsequently was the subject of an Inquest

The third part of the **Recommendations Section** contains an analysis of the recommendations generated over the last five years.

GENERAL RECOMMENDATIONS

(A) MEDICAL/NURSING MANAGEMENT

Total Number of Cases Reviewed – 2004: 28

**Total Number of Cases with Recommendations
Related to this Topic Area: 12**

1. Health care professionals should be reminded that constipation and obstipation are common, preventable, and treatable medical conditions that affect the elderly. Untreated, these conditions can be devastating and may even result in death. Once obstipation is suspected, aggressive investigation and treatment should be considered on a case by case basis.

As with many geriatric syndromes, obstipation may present either typically (abdominal pain, fecal incontinence) or atypically (confusion, delirium). Health care professionals should be especially wary of elderly patients who present with constipation/obstipation who have associated systemic symptoms (tachycardia). In these cases, the ordering of laboratory investigations and an EKG should be considered on a case by case basis.

The occurrence of overflow incontinence should alert the treating health care professionals to the possibility that the patient has developed fecal impaction with overflow incontinence. Fecal impaction can be difficult to treat and should be treated vigorously when present. Careful abdominal and rectal examinations should be performed. The findings of soft stool or no stool in the rectum does not absolutely rule out the presence of fecal impaction.

In these cases, an abdominal flat plate xray and/or a CT scan should be ordered to rule out the possibility of a higher impaction that cannot be detected on rectal examination and/or a developing acute/subacute bowel obstruction (dilated loops of bowel with air/fluid levels). While manual disimpaction should be the first intervention attempted, the presence of obstipation with a higher impaction should primarily be managed with enemas to clear the bowel from below. In some cases, the addition of oral osmotic laxatives such as Lactulose can be used to clear the bowel from above. Gastrointestinal lavage solutions have also been proven to be very effective in treating fecal impaction.

Health care professionals should always be observant for the development of complications and especially for the development of complications related to the treatment of obstipation/fecal impaction.

Reference: Constipation Can Be Deadly – Canadian Family Physician Volume 38, October 1992, Goldlist, B., Naglie, G., Gordon, M.

2. Health care professionals should be reminded that falls in the elderly and especially repeated falls can have potentially serious outcomes. All long term care institutions in the Province of Ontario should develop a comprehensive and evidence based falls prevention program which should include, but not be limited to, assessment strategies including a review of the elderly patient's medication profile, therapeutic intervention and management plans, and prevention strategies. When elderly residents fall, long term care facility staff should communicate this information to the resident's physician in a timely fashion for the purpose of allowing the physician to assess the resident for the presence of any injury and look for possible precipitating causes for the fall.

While not all falls can be prevented, elderly residents who repeatedly fall in a specific situation often require individualized interventions. For example, an elderly resident who falls at the time of transfer may require the constant presence of a health care professional until the transfer has been safely completed.

3. Health care professionals should be reminded that behaviourally problematic elderly individuals should not be cared for in a licensed long term care facility unless the facility can provide the following:
 - a) A secure locked unit that allows for a smaller grouping of elderly residents with aggressive behaviours,
 - b) Adequate and increased staff to resident ratios,
 - c) Staff who are highly trained in the management of elderly residents with aggressive behaviours,
 - d) Ongoing, systematized behavioural evaluation procedures,
 - e) Consistent linkages with specialized psychogeriatric services empowered to move behaviourally problematic residents to a more appropriate care facility when required,
 - f) The need to ensure that, if a behaviourally problematic individual is readmitted to a LTCF, provision is made for readily available consultative support with therapeutic interventions including transfer out of the LTCF to a more appropriate care facility.

4. Health care professionals should be reminded that disease presentation in the elderly is frequently atypical and may vary greatly from patient to patient. A subtle change in a patient's clinical status may well indicate that something serious is going on which may not be readily apparent. The underlying cause(s) of these atypical presentations may be missed if the investigator does not obtain an appropriate history, conduct a thorough examination, and judiciously utilize available laboratory and imaging resources.

For example, the development of an unexpected and unexplained drop in hemoglobin in an elderly patient may be an indication of a serious medical illness such as a gastrointestinal bleed due to a silent perforation of a peptic ulcer.

5. Health care professionals working in the emergency departments should be reminded of the importance of obtaining all relevant clinical information on elderly long term care facility residents who present for an emergency assessment. The importance of obtaining specific information including the events leading up to the transfer cannot be overemphasized.
6. Health care professionals should be reminded that elderly patients who fall and present to the emergency room with an altered level of consciousness should have a comprehensive medical assessment including a detailed neurological examination with appropriate imaging investigations. Documentation of the results of the assessment and investigation on the medical record should be mandatory.
7. Health care professionals caring for the neurologically compromised, ill elderly should be reminded of the importance of maintaining a high degree of vigilance for the development of complications including constipation and aspiration. Inherent in this recommendation is the need to regularly review the elderly patient's medication profile for the purpose of discontinuing or decreasing the dosage of medications that may be contributing to the complication(s).
8. Health care professionals working in licensed long term care facilities should be reminded of the importance of utilizing a recognized agitation/aggression risk assessment tool such as the "Cohen Mansfield Inventory of Aggression" for elderly licensed long term care facility residents with abnormal behaviours. Implicit in this recommendation is the need to identify a behavioural level that will automatically trigger transfer from the licensed long term care facility to a psychiatric facility for assessment.

9. Health care professionals should be reminded of the importance of providing continuity of care to their ill elderly patients. This is especially important when an ill elderly patient is receiving care from multiple acute care health institutions.
10. Community Care Access Centre health care professionals should be reminded of the importance of accurately identifying the care needs of elderly clients with abnormal aggressive behaviours.
11. Health care professionals working in Regional Geriatric Psychiatry Assessment Services should be reminded of the importance of the following:
 - a) Removing elderly aggressive residents from a licensed long term care facility for a comprehensive formal medical/behavioural assessment,
 - b) Providing ongoing clinical support for admitted patients who develop an acute medical illness and are then transferred back to a long term care facility, and
 - c) Ensuring that the regional psychogeriatrician formally and directly assesses elderly long term care facility residents with aggressive behaviours.
12. The Psychogeriatric Outreach Team should be complimented for their prompt response, comprehensive assessment and their treatment recommendations. They kept in touch with the long term care facility and even arranged for the patient to be admitted to the Psychogeriatric Unit in a rapid manner for assessment.
13. Health care professionals should be reminded of the importance of close, ongoing monitoring of elderly patients with complex, unstable medical conditions.
14. Health care professionals should be reminded of the importance of providing continuity of care for elderly patients with complex care needs. Physicians especially should ensure that arrangements are made for their patients when they are away on annual leave.
15. Health care providers are reminded of the need to engage and encourage families and/or substitute decision makers to become involved in the care management of their loved ones. Ensuring their presence at annual interdisciplinary care conferences should be considered an integral part of effective care management. Providing a written invitation emphasizing the importance of their participation should be considered.

16. Given that the elderly frequently have multiple medical diseases that may affect multiple organ systems, health care professionals should be reminded of the importance of conducting a comprehensive assessment especially if the elderly patient's response to treatment is not what was expected.
17. Health care professionals should be reminded of the importance of conducting a comprehensive investigation in the elderly looking for the cause of a newly developed decrease in oxygen saturation.
18. Health care professionals should be reminded of the importance of conducting a comprehensive investigation in the elderly looking for the cause of newly developed symptoms such as nausea and vomiting.
19. Health care providers should be aware of the co-existence of depression with dementia. The assessment of depression can be very challenging in this situation, however treatment can likewise be extremely beneficial.
20. Health care providers should be reminded of the significance of involuntary weight loss in the elderly (see Alibhai SMH, Greenwood C, Payette H. CMAJ 2005; 172 (6):773-80). Weight loss should prompt a full and thorough assessment, and investigations to determine the underlying cause for the weight loss and its treatment.
21. Health care providers are encouraged to initiate early aggressive management of electrolyte abnormalities in the elderly.
22. Health care professionals should be knowledgeable about the reporting requirements of Section 10 of the Coroners Act of Ontario.

Comment: This recommendation was made in three reviews in 2005.

(B) COMMUNICATION AND DOCUMENTATION

Total Number of Cases Reviewed – 2005: 28

**Total Number of Cases with Recommendations
Related to this Topic Area: 7**

1. Health care professionals should be reminded of the importance of keeping complete, comprehensive, and accurate progress notes regarding treatment decisions and assessments. Frequently, the Committee finds these notes to be absent, scanty, incomplete, irrelevant, inaccurate, and/or illegible. These notes should meaningfully reflect issues identified

by all members of the health care team (including the family) and include the reason why certain treatments are/are not being done in relation to these issues.

Institutions need to develop quality assurance programs in order to determine their level of compliance with these programs and to correct any deficiencies where present.

2. Emergency room health care professionals should be reminded of the importance of ensuring that all relevant clinical information is directly communicated to the attending physician prior to an elderly patient's release from the emergency room.

For example, the passing of black stools which occurs after the discharge order has been written and prior to patient leaving the emergency room should be directly communicated to the attending physician.

3. Health care professionals should be reminded of the importance of good communication with patients and their family members when a patient has been designated as requiring palliative care. Implicit in this recommendation is the need to ensure that the patient and family members are aware of the progressive nature of the terminal illness and that sudden and unexpected complications including death may occur at any time.
4. Health care professionals should be reminded of the importance of communicating all relevant clinical information at times of transition in the care process. For example, hospital health care professionals should ensure that all relevant information is communicated to community based health care professionals at the time of discharge from the hospital.
5. In general, communication with families regarding the status and care of their loved one cannot be overemphasized. Especially in the situation of end stage dementia, preparation of the family for death is essential. Communicate early, and often, and document this in the chart.
6. Physicians should be reminded of the importance of regular and thorough documentation of assessments and plans for residents in a LTCF.
7. Health care professionals should be reminded that in cases of incapable persons, it is vital to communicate clearly with the authorized substitute decision maker regarding any and all treatment decisions, as defined

under the Health Care Consent Act. This communication and consent should be clearly documented in the chart.

8. Documentation of changes in status and/or changes in interventions or treatments should require a timely written note as to the outcome of the new regime or the changes in status initially noted.
9. Documentation in client records should include key findings stemming from a comprehensive assessment and any recommendations or changes in care regime should require clearly articulated rationale.

(C) THE USE OF DRUGS IN THE ELDERLY

Total Number of Cases Reviewed – 2005: 28

**Total Number of Cases with Recommendations
Related to this Topic Area: 5**

1. Health care professionals should be reminded that Meperidine Hydrochloride is a narcotic that should rarely, if ever, be prescribed for the elderly because of its prolonged half life, penchant for causing and/or exacerbating a delirium, and tendency to mask other symptoms. If narcotic analgesia is required, consideration should be given to using a narcotic such as Morphine Sulfate which has a shorter half life and less anticholinergic effects.
2. Health care professionals should be reminded that the prescribing of medications with anticholinergic properties to dehydrated, critically ill elderly patients may result in an exacerbation of their clinical condition including death.

For example, prescribing medications with anticholinergic side effects such as Dimenhydrinate, Meperidine Hydrochloride, and Haloperidol in an elderly patient with hypovolemic related large bowel disease may result in bowel dilatation and increased cardiac irritability because of an increased autonomic response.

3. Health care professionals should be reminded of the importance of watching for the development of side effects of medications prescribed to elderly patients with impaired hepatic or renal function.

For example, elderly diabetic patients with impaired hepatic and/or renal function who are receiving oral hypoglycemic agents including the

biguanides and/or sulfonylureas should be closely monitored for the development of hypoglycemia.

4. Health care professionals should be reminded that the use of corticosteroids can mask the severity of symptoms of disease processes especially abdominal findings. When corticosteroids are required, health care professionals should be highly vigilant for the insidious development of adverse clinical complications.
5. When using psychoactive drugs in the ill elderly, the lowest dose possible should be the initial dose and further doses titrated upwards depending on the response unless there is convincing evidence that a higher dose is necessary because of compelling clinical considerations (i.e. acute delirium) which puts the patient at extreme risk and requires rapid intervention to eliminate the associated agitation which might interfere with medical care.
6. Health care professionals prescribing “prn” psychoactive medications for the agitated, immobilized elderly should be reminded of the importance of specifying what the “prn” medication is to be given for.
7. Health care professionals should be reminded that the anti-nauseant Dimenhydrinate is a centrally acting medication that may further impair bowel motility which may be the cause of an elderly person’s nausea and/or vomiting.
8. Health care professionals should be reminded of the importance of frequent monitoring of elderly patients discharged from hospital on anticoagulant therapy. Communication of this information to the patient’s community health care professional should be mandatory. Consideration should be given to utilizing a published, validated algorithm for the management of anticoagulant therapy.

Reference: Ansell, J., Hirsh J., Daten HJ., et al. Managing oral anticoagulant therapy. Chset 2001: 199 (1 suppl): 22S – 38S.

(D) ADMISSION/DISCHARGE/TRANSFER PROCEDURES

Total Number of Cases Reviewed – 2005:	28
Total Number of Cases with Recommendations Related to this Topic Area:	3

1. Although the physician has the final say in the discharge process and writes the discharge order, it is the Committee's view that the discharge of elderly patients from hospital (acute or chronic) should be as a general consensus of the health care team (physician, nurse, homecare, patient, family, discharge planner, etc.). Implicit in the discharge process is the need for good documentation and communication of concerns amongst all members of the health care team. Where concerns about the discharge have arisen and not been satisfactorily resolved, the holding of a case conference including all members of the health care team should occur in order to address the concerns.

There are many factors that should be considered when making the discharge decision (vital signs, level of function, clinical status of the patient, home supports, etc.). Rarely is it appropriate to discharge an unstable patient from hospital to another setting unless the receiving institution is informed of the patient's clinical condition, is capable of providing adequate care for the patient, and agrees to accept the patient.

**THE DISCHARGE DECISION AND PROCESS SHOULD ALWAYS BE
IN THE INTEREST OF ENSURING PATIENT SAFETY AND THAT THE
CLINICAL NEEDS OF THE PATIENT WILL BE MET. THE DISCHARGE
DECISION AND PROCESS SHOULD NEVER BE BASED ON THE
NEEDS OF THE HOSPITAL!**

2. Health care professionals should be reminded of the importance of choosing an appropriate transport vehicle when transferring a patient between facilities. The type of transport vehicle selected should match the patient's clinical needs.

For example, the transport of a patient who may potentially become unstable during the transfer should be done in a paramedic equipped vehicle such as an ambulance. Transportation in a non-paramedic equipped land transport vehicle should only occur if the attendants are trained and equipped to manage the patient's clinical needs. Should an appropriate vehicle not be available to transport the patient, consideration should be given to delaying the transfer until the patient's clinical condition has been stabilized or an appropriate transfer vehicle becomes available.

3. Health care professionals including discharge planners should be reminded of the importance of implementing a coordinated and well communicated care plan for high risk patients. Especially important is the need to establish a plan to manage complications should they arise.
4. Acute care general hospitals should be reminded of the importance of utilizing clear guidelines and/or criteria based discharge protocols for elderly postoperative patients who are being discharged early.

(E) DETERMINATION OF CAPACITY AND CONSENT FOR TREATMENT/DNR

Total Number of Cases Reviewed – 2005: 28

**Total Number of Cases with Recommendations
Related to this Topic Area: 2**

1. Health care professionals should be reminded of the importance of writing a detailed progress note when entering a “DNR” order on a patient’s medical record. The progress note should clearly indicate the rationale behind the decision making process and by whom the decision was made. This note could then eliminate ambiguity as to what other investigations and/or treatments are indicated in the event of the occurrence of an acute problem, short of carrying out CPR or assisted ventilation. The importance of reviewing this decision with the patient if competent, or family members, cannot be overemphasized. This is especially important if the patient has developed a potentially treatable medical complication such as a drug induced respiratory failure or sustained injuries due to an accidental event.

“DO NOT RESUSCITATE” (DNR) DOES NOT MEAN DO NOT TREAT”

2. Health care providers are reminded of the need to engage and communicate with patients and families and encourage them to develop advance care directives to ensure that patient’s wishes are observed during end-of-life illnesses.
3. Health care providers are reminded of the need to communicate with substitute decision makers in the event that a patient becomes incapable, particularly in the face of life threatening illness.

(F) THE MINISTRY OF HEALTH AND LONG-TERM CARE

Total Number of Cases Reviewed – 2005: 28

**Total Number of Cases with Recommendations
Related to this Topic Area: 1**

1. The Ministry of Health and Long-Term Care should be reminded of the high human cost of dislocating elderly patients from their family and friends while awaiting appropriate and safe long term care placement.

(G) THE ACUTE CARE AND LONG TERM CARE INDUSTRY

Total Number of Cases Reviewed – 2005: 28

**Total Number of Cases with Recommendations
Related to this Topic Area: 6**

1. It is important to staff within nursing homes to recognize the subtle changes evidenced in the elderly that can be evidence of significant changes in clinical status.
2. All long term care facilities in the Province of Ontario should review what prepackaged condiments are made available to residents who are deemed to be at risk for choking for the purpose of minimizing the risk of accidental airway obstruction and death.
3. All long term care facilities in the Province of Ontario should develop a policy and procedure to ensure that non stocked medications such as parenteral narcotics can be obtained in a timely fashion.
4. Hospital management should review Code Yellow Protocols (missing person) and whether sufficient personnel are available during the night to carry out the protocols in an expeditious manner.
5. Medical coverage for the LTCF should be readily available to deal with urgent matters on site when needed as well as phone advice in a timely manner.
6. The Medical (Professional) Advisory Committee of the nursing home should receive a copy of this report, and consider its contents emphasizing communication, care management and the circumstances that occurred on the day of death.

7. Nursing staff in nursing homes should have access to physical assessment refresher courses to ensure quality clinical assessments in our frail nursing home clientele.
8. The nursing home staff should be complimented on their attempts to manage such a difficult patient. Many long term care facilities might simply have “formed” the patient and sent them to the emergency room.
9. Long-term care facilities should be aware of what options exist for an autopsy of a client when a coroner’s autopsy is not indicated.

(H) THE OFFICE OF THE CHIEF CORONER

Total Number of Cases Reviewed – 2005: 28

**Total Number of Cases with Recommendations
Related to this Topic Area: 7**

1. The Office of the Chief Coroner should give consideration to publishing the circumstances surrounding this death in the Sixteenth Annual Report of the Geriatric/Long Term Care Review Committee to the Chief Coroner for the Province of Ontario.

Comment: This recommendation was made in seven reviews in 2005.

2. The Office of the Chief Coroner should remind coroners that all homicides of residents of licensed long term care facilities will be reviewed by the Geriatric/Long Term Care Review Committee. The importance of ensuring that a full police investigation, including the obtaining of the alleged assailant’s medical records, should be mandatory to allow for a meaningful comprehensive review by the Committee.
3. The Office of the Chief Coroner should develop a mechanism to identify and monitor deaths associated with the use of mechanical lifting devices. Should systemic public safety issues be identified, these issues should be communicated to provincial and national health care organizations and health care professionals for the purpose of advancing public safety.

CASE REVIEWS

CASE #1

ISSUES

1. Community assessment of elderly patients with cognitive impairment and abnormal behaviours.
2. The crisis admission process to a licensed long term care facility.
3. Provincial resources available to manage elderly patients with cognitive impairment and abnormal behaviours.

HISTORY

This is the case of Mr. R, age 71 years and Mr. L, age 83 years who resided in room 204 of the licensed long term care facility (LTCF) where they were assaulted and died on June 9, 2001.

On January 28, 2001, Mr. L underwent an open reduction and internal fixation of a fractured right ankle. Due to increased care needs, he was admitted to the LTCF on March 26, 2001. At the time of admission, LTCF staff recorded that he was:

1. Incontinent,
2. Dependent for his personal care needs,
3. Independently mobile only in a wheelchair and required a seatbelt restraint for safety,
4. Receiving physiotherapy ambulation training with a high wheeled walker with two persons assisting, and
5. Required two persons for transfers.

Behaviourally, he required encouragement to take his medications and to allow personal care to be given. At times, he flatly refused to receive personal care. On one occasion, he accused LTCF staff of stealing money from his wallet but responded to reassurance and redirection from a close friend who was visiting that day. There were no recorded notes to indicate that he was agitated or aggressive in any way. He spent most of the day moving aimlessly about the unit in his wheelchair returning to his bed for a nap each afternoon and after the evening meal for the night.

On June 6, 2001, Mr. R was admitted to the LTCF from the community with the diagnoses of dementia (possibly frontal-temporal because of apathy and passiveness), chronic obstructive pulmonary disease, and carcinoma of the

prostate. At the time of his death three days later, his admission had only been partially completed although much of his care plan had indeed been developed by that time. LTCF staff noted that he was:

1. Independently ambulatory with no aids,
2. At risk for falls,
3. Required supervision for transfers,
4. Incontinent, and
5. Required one person supervision and assistance for personal care.

Behaviourally, he was noted to be cooperative and there were no dementia related abnormal behaviours.

On the afternoon of Saturday, June 9, 2001, Mr.S, age 76 years, was admitted to the LTCF from the community as a crisis admission. This Punjabi speaking gentleman's past medical history included the following:

1. Carcinoma of the prostate 1988,
2. Klebsiella pneumonia requiring hospitalization 1997,
3. Chronic obstructive pulmonary disease,
4. Asthma, and
5. Atrial fibrillation which was treated with Warfarin Sodium since 1999. The anticoagulant therapy was stopped in 2000 for unknown reasons.

Just over two months previously on March 25, 2001, Mr. S awoke from his sleep and was unable to see. He was taken to the local acute care hospital where a CT scan of the head demonstrated the presence of a recent right parietal infarct and a left posterior mesial temporal infarct presumably embolic in etiology due to atrial fibrillation. Anticoagulant therapy was started. He then developed significant confusion and agitation. Prior to the hospitalization, no cognitive or behaviour problems had been identified. Nursing documentation noted that he was "disruptive when the family is not around" and that there were communication difficulties "due to language barrier". In the hospital discharge summary it was noted that "on the day following admission, he was able to see well enough to walk around without bumping into the furniture and (was) able to count fingers". Because of agitation including shouting and wandering into other patient's rooms, he was discharged home at 21:15 hours on March 28, 2001 with follow up INR monitoring to be done by the family physician. The discharge diagnoses included cardioembolic stroke, atrial fibrillation and delirium.

On March 29, 2001, Mr. S visited his family physician who noted that the patient was confused, quiet and cooperative, and did not recognize his son or family physician of six years. A visual assessment was not recorded.

On April 25, 2001, Mr. S was seen in follow up by the neurologist who was of the opinion that his vision was back to what it was prior to the stroke. The neurologist noted that "he does not think his vision is poor in any way". Examination indicated that the "visual fields appear full".

The neurologist also stated that "his agitation and confusion stopped on discharge from hospital". The Committee noted that neither an ophthalmology nor a neuro ophthalmology consultation had been obtained.

From March 29, 2001 to June 2, 2001, the family physician's office record referred only to INR results and adjustments to the anticoagulant dosage.

On June 2, 2001, Mr. S was taken by his son to see the family physician. At the time, Mr. S lived with his wife who cared for him 24 hours/day, his son who worked the afternoon shift part time, his daughter-in-law who worked full time, and two grandsons, one of whom was in high school, and the other who worked full time on a rotating shift. The family physician's record stated that "the family want to put him in the nursing home as the family can not take care of him. Afraid to leave him alone, to take to the outside, as he is forgetful, still confused". The LTC Medical Report was completed. The family was advised to seek another appointment with the neurologist if the patient was not placed in a LTCF. Diagnoses listed on the LTC Medical Report included the following:

1. Atrial fibrillation,
2. TURP,
3. COPD,
4. Asthma,
5. CHF,
6. ? Stroke,
7. Confused, and
8. Agitated.

The family physician also completed the Capacity Assessment to Make Admission Decisions which indicated that Mr. S was incapable of making this decision.

Four days later on June 6, 2001, the Community Care Access Centre (CCAC) Application for placement was completed by a social worker (Assessor #1) in Mr. S's home. This assessment revealed that Mr. S was:

1. Independently ambulatory,
2. Continent,
3. Independent in all of his personal care except bathing, and
4. Cognitively impaired with poor memory, judgement, and disorientation.

The functional assessment included some behavioural screening questions which revealed that Mr. S was:

1. Demanding with family,
2. Disruptive,
3. Repetitive,
4. Hoarding of toiletries,
5. Suspicious and paranoid, especially regarding family members stealing things,
6. Cognitively impaired but socially appropriate behaviour most of the time,
7. Physically aggressive towards his wife and son when he was suspicious of them,
8. Attempting to hit when frustrated, and
9. Disruptive at night talking about items missing and dead friends.

Assessor #1 wondered if Mr. S was having visual hallucinations at night.

On Thursday, June 7, 2001, the Application for Placement in a LTCF was received at the CCAC. The cover sheet was entitled "Crisis/Intake Form" which included ten questions pertaining to the applicant's needs. The questions and responses are included with the following table.

QUESTION	ANSWER
Accommodation	Ward
Cognitive Status	Mildly impaired ("moderately" and "very" were options)
Level of Care (5 Levels from light to heavy)	Medium
Special Needs	Aggressive – verbal and physical
Secure Unit	(No answer)
Behaviours	Yes
Capacity for Admission Decision	Incompetent
Is there a SDM? (Substitute Decision Maker)	Yes
Are finances available?	(No answer)
Reason for Crisis Placement	Caregiver unable to cope, Safety Compromised, Abusive Situation

The narrative portion of the form noted that a crisis placement was requested by family members because of Mr. S's aggressive behaviour and his frequent waking and yelling at night which had put the entire extended family into a

state of sleep deprivation. “Disruptive sleep and aggressive behaviour towards family” was recorded on the form. Also noted was the fact that Mr. S had been exhibiting escalating behaviour problems over the past two months. Recorded on the form was the fact that the “spouse managed all ADL (activities of daily living) there 24 hours a day”.

At 11:45 hours on Friday, June 8, 2001, the CCAC coordinator began searching for a male crisis bed in a LTCF. A bed was identified later that day.

Later that afternoon, a more detailed Behavioural Assessment was completed by a CCAC Coordinator over the telephone with a grandson. This particular assessment is required for applicants who have had abnormal behaviours noted on the screening questionnaire (completed by Assessor #1). It was also noted that the LTCF “requiring more info on wandering and hoarding”. Apparently, Mr. S’s son did not want to do the behavioural interview over the telephone as he felt his English was not adequate. Therefore, the grandson completed the detailed behaviour interview as follows:

BEHAVIOURS PRESENT AND REQUIRING INTERVENTION	BEHAVIOURS <u>NOT</u> PRESENT OR <u>NOT</u> REQUIRING INTERVENTION
WANDERS (tries to go outside, family supervises 24 hrs./day, slow to medium walker, if he sleeps in day, will he wander at night)	AGITATED BEHAVIOUR (restlessness, crying out)
HOARDING/RUMMAGING (hoards toiletries)	INGESTION OF FOREIGN SUBSTANCES
AGGRESSIVE/ANGRY BEHAVIOUR (verbally but not physically aggressive or abusive in predictable situations with family such as if he asks them for money and they say they have none)	INAPPROPRIATE SEXUAL BEHAVIOUR
SUSPICIOUS BEHAVIOUR (occasionally thinks people have taken things as he has forgotten where he placed them)	SMOKING, ALCOHOL OR DRUG USE
	RESISTANCE TO CARE
	SADNESS/DEPRESSION, SUICIDAL BEHAVIOUR
	ATTENTION SEEKING/ANXIOUS BEHAVIOUR
	INEFFECTIVE COPING
	POTENTIAL FOR INJURY TO SELF OR OTHERS (Presence of behaviour that places self or others at risk for psychosocial or physical injury and which required intervention). This includes clients whose physical condition or tendency towards violence contributes to any form of risk. Intervention is aimed at reducing or removing risk.)

The Committee noted that this second telephone conducted assessment directly contradicted some of the findings recorded in the initial assessment performed by the social worker. The CCAC file including the behaviour assessment was faxed

to the LTCF at 13:20 hours. Forty minutes later at 14:00 hours, the LTCF offered a bed to Mr. S. Arrangements for admission were scheduled for the next day.

At 13:00 hours on Saturday, June 9, 2001, Mr. S was admitted to room 204 of the LTCF. The admitting nurse recorded that "family informed writer that resident can be very aggressive and violent" and "family says he can be restless and aggressive". The Admission Care Plan noted that Mr. S could be "agitated" and "verbally and physically aggressive". Admission medications included the following:

1. Diltiazem Hydrochloride,
2. Lanoxin,
3. Warfarin Sodium,
4. Temazepam 30 mg. qhs., and
5. Acetaminophen prn.

According to witness statements obtained by the investigating police service, Mr. S's afternoon appeared to be uneventful. At supper time, he was polite and cooperative and retired to bed around 19:00 hours.

At 19:30 hours on June 9, 2001, LTCF staff recorded that loud noises and thuds were heard from behind the closed door of room 204. LTCF staff entered the room and found Mr. R lying face down in a pool of blood at the side of his bed with obvious severe trauma to his head. The curtain around the bed of Mr. L was partially closed. Mr. S was observed to be bludgeoning Mr. L about the head with the porcelain top of a toilet tank and a metal bar. The LTCF staff member immediately exited the room to obtain assistance. At that moment, Mr. S left room 204 and entered room 203 where Mr. N resided. Mr. S then attacked Mr. N. After several blows, LTCF staff from multiple floors arrived and were able to restrain Mr. S. The metal bar had to be forcefully removed from his possession. LTCF staff noted that Mr. S was highly agitated and attempted to bite and injure staff.

Following the arrival of emergency response personnel, Mr. S was arrested and taken to the police station where he remained extremely agitated and continued to strike out and bite the police officers. The investigation revealed that both Mr. R and Mr. L were deceased. Mr. N was stabilized and transported to hospital where he recovered from his injuries.

The post mortem examination of Mr. R revealed the presence of multiple facial lacerations with multiple facial and skull fractures. The nose and hard palate were "floating" and there were multiple skull fractures. Lacerations of the left hand and upper chest were present. The right tibia and fibula were fractured. The epiglottis was fractured and floating. Extensive hemorrhage into the soft

tissues of the neck was noted. Deep, large lacerations of the left temporal lobe were noted. Death was attributed to craniocerebral blunt force injuries.

The post mortem examination of Mr. L revealed that, in the sheets surrounding the body, there was a small wheel with brain tissue on it and a piece of bloody porcelain. The left side of his face was smashed. There was a gaping wound of the right facial area through which the cranial cavity and brain tissue could be seen. The nose was fractured, flattened, and lacerated. There was a comminuted fracture of the frontal bone, a depressed right parietal fracture, and a fracture of the occiput extending into the foramen magnum. The right eye ball was collapsed and lying loose. Abrasions, bruising, and lacerations were present in the hands. There was abundant subarachnoid hemorrhage with severe brain contusions/lacerations and pulpification of the frontal lobe. The cause of death was attributed to craniocerebral blunt force injuries.

The deaths were reported to the Coroners' Office. The investigating coroner attended the scene and, following the post mortem examinations, had the following questions:

1. Was the behaviour assessment of Mr. S adequate prior to or at the time of admission to the LTCF?
2. Was the staffing in the LTCF at the time of the attack adequate?
3. Should an aggressive resident have been placed in a room with immobile, vulnerable residents?
4. Should an aggressive resident be placed in a room distant from the nursing station?

DISCUSSION

The circumstances surrounding the deaths of Mr. R and Mr. L outline the challenges faced by health care professionals in Ontario who are faced with the diagnosis, treatment, and placement of elderly patients with cognitive impairment and abnormal behaviours.

It is important to be aware that agitation, aggression, and psychoses are commonly associated with dementia. In this particular case, Mr. S had a history of several strokes and significant cognitive impairment most likely due to a vascular dementia. In addition, he had an episode of delirium following a stroke which occurred in late March 2001. Delirium in the elderly often takes a considerable period of time to completely resolve. It is quite possible that he had residual symptoms of delirium in addition to his underlying vascular dementia. The history also suggests that he suffered from paranoid thinking. The fact that he did not speak English may have also been a contributing factor as it may have added to his degree of disorientation following his admission to the LTCF.

Tariot and Blazina reviewed the literature with regard to the prevalence of behavioural and psychological symptoms associated with dementia. They calculated median figures of 44% for global agitation, 24% for verbal aggression, and 14% for physical aggression.

Psychotic symptoms are also commonly associated with dementia. Wragg and Jeste reviewed studies which reported rates of delusions and hallucinations in patients with Alzheimer's disease. They calculated median figures of 36% for delusions and 28% for hallucinations.

Despite the fact that aggressive behaviours occur commonly in individuals with dementia, episodes of extreme aggression, as demonstrated in the case of Mr. S, are fortunately very rare. A search of MedLine using PubMed did not reveal any studies or case series that reported deaths caused by aggressive patients with dementia. There are, however, a number of reports in the media describing isolated episodes in LTCFs which have resulted in deaths.

In this particular case, the critical question is whether the attacks by Mr. S could have been predicted and prevented. To address this question, the Committee identified five areas where alternate interventions may have altered the outcome. These areas included:

1. The assessment and diagnosis of elderly patients with cognitive impairment and abnormal behaviours,
2. Challenges faced by CCACs around the crisis placement of clients with cognitive impairment and abnormal behaviours,
3. The lack of services available in Ontario for elderly patients with cognitive impairment and abnormal behaviours,
4. The inflexibility of the LTCF admission process, and
5. Staffing and training of staff in the LTCF.

1. The assessment and diagnosis of elderly patients with cognitive impairment and abnormal behaviours.

The assailant in this case, Mr. S, was suffering from cognitive impairment accompanied by aggressive behaviours and a number of other chronic medical conditions including atrial fibrillation for which he was taking an anticoagulant from 1999. For reasons that were not documented, the anticoagulant was discontinued in 2000. It would appear to the Committee that the family physician and consultant neurologist were more focused on his embolic vascular problem than on his abnormal behaviours and cognitive impairment.

Following the stroke in late March 2001, Mr. S's aggressive behaviour appeared to escalate and may well have been due to a delirium superimposed on his dementia. It was the Committee's view that a comprehensive investigation of Mr. PS's cognitive impairment and abnormal behaviours at that time may have resulted in an accurate diagnosis being made which would have allowed for much more planning and specific treatment. This raised a number of questions in the Committee's mind.

- a) At the time of the stroke related visual loss, was consideration given to obtaining a formal visual assessment?
- b) Given the abnormal behaviours in the hospital, why was the decision made to discharge Mr. S home late at night just three days after admission? Did any of the health care professionals inquire into the home situation and whether or not the family was prepared to manage him at home?
- c) Was consideration given to conducting investigations to search for possible medical conditions that may have been contributing to his abnormal behaviours?
- d) Was consideration given to obtaining a consultation with a geriatrician or a psychogeriatrician?

It was the Committee's opinion that consultation with a geriatrician or psychogeriatrician at some point prior to admission to the LTCF may have been helpful. An accurate clinical diagnosis might have been made and therapeutic interventions such as with an antipsychotic could have been considered.

2. Challenges faced by CCACs around the crisis placement of clients with cognitive impairment and abnormal behaviours.

The Committee was concerned about the CCAC crisis placement process, a process wherein the CCAC is required to expedite placement of a client to any available LTCF within 48 hours. If the client cannot be placed in a LTCF within 48 hours, the placement then becomes a non crisis. In the Committee's mind, this time related reclassification is illogical and may put the client and/or their caregivers at risk.

In this particular case, the entire process from the time of receipt of the application to the time of admission to the LTCF was approximately 48 hours. Of concern to the Committee was the fact that this expedited process appeared to occur at the expense of gathering vital information about Mr. S and his escalating abnormal behaviours and the risks these behaviours posed. Again, the Committee was of the opinion that there were a number of points of intervention

that may not have been fully appreciated in the assessment and placement process. This raised a number of questions in the Committee's mind.

- a) Why was there a lack of detailed information around the central reason for the crisis placement, that being escalating behavioural problems, recorded by the CCAC assessors?
- b) Why was the CCAC Behaviour Assessment completed by a different assessor?
- c) Why did the second CCAC assessor not inquire into the discrepancies between her assessment and the screening assessment done by the social worker?
- d) Why was the detailed Behaviour Assessment not done with the wife, the person who was feeling most at risk?
- e) If there was a language barrier, was consideration given to obtaining the services of an interpreter?
- f) Why was the detailed Behaviour Assessment done with a grandson, a person who may not have been in the best position to provide the relevant clinical and domestic information?
- g) Why did the second CCAC assessor leave the section for "Potential for Injury to Self or Others" blank? If this section had been completed, would this have resulted in a delay in the admission to the LTCF or possibly a refusal by the LTCF to accept this resident?

Given these questions, the Committee was of the opinion that the CCAC "Crisis Place" process should be re-evaluated.

3. The lack of services in Ontario for elderly patients with cognitive impairment and abnormal behaviours.

The Committee wondered if the CCAC staff were aware that there are very few services and facilities in Ontario that can assess and treat patients with cognitive impairment and abnormal behaviours. In addition, the Committee wondered if the CCAC staff felt that their hands were tied by a system that directs that the crisis admission must go to the first available LTCF bed within 48 hours. In the Committee's mind, this crisis admission system has the potential to ignore some of the needs of the client and the needs/treatment resources within the LTCF.

Even if the CCAC staff had recognized the risk for aggression and violence, what alternatives were available to help this family in crisis other than to admit the client to a LTCF? If Mr. S had been referred to the emergency room of an acute care hospital, the Committee suspected that he would have likely ended up being discharged home from an overcrowded emergency room. The Committee is also aware that psychogeriatric services are in short supply in Ontario and inpatient assessment beds even more so. Likely, efforts to access these services directly

would have been frustrating and ultimately fruitless, even working in conjunction with the family physician. Recognizing the above noted resource limitations, the Committee wondered if this was a factor in the decision to proceed with the admission to the LTCF on a Saturday afternoon.

If admission to the LTCF was deemed to be the only feasible option, was consideration given to delaying the admission until Monday when there would be more staff available to manage this complex, behaviourally challenging gentleman?

4. The inflexibility of the LTCF admission process.

On the afternoon of admission to the LTCF, the nursing notes recorded that family members clearly verbalized the potential for physically aggressive behaviour. The Committee wondered what intervention strategies nursing staff considered implementing should a situation arise. Despite this information, Mr. S was lodged in room 204 with other vulnerable, immobile residents, a room that was some distance from the nursing station. The Committee suspected that the bed provided to Mr. S was the only available bed in the LTCF and staff really had no other placement options. Recognizing that admission to a LTCF can be a difficult and disorienting experience for the elderly and especially for the elderly with cognitive impairment and abnormal behaviours, was consideration given to moving him closer to the nursing station and/or more closely monitoring him? Was consideration given to contacting the on call administrator to discuss the situation?

In fairness to the LTCF staff, Mr. S did appear to have an uneventful afternoon and was noted to be polite and cooperative at supper time. Indeed, it was the Committee's opinion that it would have been very difficult for staff to anticipate the severity of the attack which occurred suddenly and without warning just six and one half hours after admission.

5. Staffing and training of staff in the LTCF.

The Committee did not feel they could comment on staffing levels in the LTCF without more information of the patient mix and care needs.

The Committee is aware that there has been much recent attention on the entire issue of long term care residents with psychiatric and behavioural problems. A national symposium on "Gaps in Mental Health Services For Seniors in Long Term Care Settings" was held in Toronto last year. As a result of this symposium, a national coalition was formed which identified a number of challenges that need to be addressed. These challenges included:

- a) Inadequate detection and treatment of mental health disorders,
- b) Shortage of specialized mental health professionals trained in geriatrics,
- c) Inadequate training of nursing home staff about mental health issues,
- d) Lack of coordination between service providers,
- e) Insufficient research activity aimed at this target population to determine what is effective,
- f) Stigma related to age and/or mental health disorders that may cause inappropriate staff responses and utilization of services, and
- g) Insufficient resources to address many of the issues mentioned above.

The Committee is also aware that a number of Ministry of Health and Long-Term Care initiatives have recently been developed in an attempt to improve the situation. One of these initiatives includes the PIECES program which allows one staff member from every LTCF in Ontario to receive a short training program. Another initiative is the hiring of fifty Psychogeriatric Resource Consultants who are distributed throughout the province.

RECOMMENDATIONS

1. The Office of the Chief Coroner should give consideration to publishing the circumstances surrounding these deaths in a future Annual Report of the Geriatric/Long Term Care Review Committee to the Chief Coroner for the Province of Ontario.
2. The Ministry of Health and Long-Term Care should be encouraged to rapidly increase the resources and capacity of the health care system to effectively manage elderly patients with cognitive impairment and abnormal behaviours. Recognizing that this patient group is expected to rapidly increase in numbers in the years to come, the Ministry, in consultation with health care professionals working in the field, should develop and implement a comprehensive and well resourced management strategy to address the deficiencies identified by the National Coalition commissioned by the national symposium "Gaps in Mental Health Services for Seniors in Long Term Care Settings". Implicit in this recommendation is the need to ensure that the system can safely manage emergency situations where there is a potential risk to a care giver and/or others.
3. Health care professionals working with the elderly should receive ongoing education in the management of elderly with cognitive impairment and abnormal behaviours. Implicit in this recommendation is the urgent need for health care professionals to be able to identify risky, abnormal

behaviours and to be knowledgeable about what resource interventions are available to them in the short, intermediate, and long term.

4. The Ministry of Health and Long Term Care in consultation with health care professionals working in the long term care industry and especially the Community Care Access Centre sector should critically review the process for “crisis admission” to long term care facilities. Implicit in this recommendation is the recognition that the crisis admission must be completed expeditiously but not at the risk of compromising the safety of the patient, the caregiver(s), or the health care professionals and/or residents at the receiving long term care facility.
5. When faced with an elderly resident with cognitive impairment and abnormal aggressive behaviours, Community Care Access Centre professionals should ensure that a comprehensive medical assessment has been completed by a specialist with expertise in these areas. Where abnormal behaviours have been identified as a risk to others, consideration should be given to delaying the admission to the long term care facility until the abnormal behaviours have been treated and judged not to be a risk to others.

CASE #2

ISSUES

1. Medical/Nursing Management of constipation in the elderly.
2. The Use of Drugs in the Elderly

HISTORY

This is the case of a 77 year old woman whose past medical history included the following:

1. Hypertension,
2. Hypercholesterolemia,
3. Type II diabetes mellitus,
4. Osteoarthritis,
5. Mild chronic obstructive pulmonary disease,
6. Chronic constipation (A note on the family physician's chart recorded in July 2003 indicated that "increased fiber has helped, no further abdominal pain"), and
7. Possible irritable bowel syndrome noted in a general surgeon's consultation note dated August 21, 2001.

In August 2001, the woman was seen by a general surgeon because of a possible rectal mass. The referring family physician was requesting that a colonoscopy should be performed. The surgeon noted that in 1999, the woman had presented with crampy lower abdominal pain, diarrhea, and blood per rectum. A solitary ulcer was found in the distal colon. No specific treatment was prescribed and her symptoms appeared to spontaneously resolve. In August 2001, the woman had an episode of lower abdominal pain and diarrhea after being prescribed Ibuprofen for non-cardiac chest discomfort. Rectal examination by the surgeon indicated that the mass was likely stool.

On October 1, 2001, a colonoscopy was performed with the report stating the following:

"Immediately on entering the rectum there was residual solid stool. We were able to proceed with constant irrigation to a distance of approximately 70 centimeters at which point visualization became impossible.... There is no indication at this time for proceeding with barium enema, as this again will be limited by the presence of stool."

In December 2002, the woman presented to the emergency room (ER) of a general hospital (GH #1) with abdominal pain and diarrhea. The diagnosis of constipation was made.

Throughout 2003 until the middle of July 2004, the woman's chronic medical conditions were followed by her family physician. The only note referring to bowel related complaints was recorded in July 2003. The note indicated that the woman's abdominal pain had responded to increased dietary fibre.

On July 26, 2004, the woman presented to the ER of GH #1 with bloody diarrhea, volume depletion, and vomiting. Abdominal xrays demonstrated the presence of a single loop of bowel in the left mid-abdomen. The radiologist questioned the presence of an edematous mucosa and suggested clinical correlation with this finding. Air-fluid levels were not present. There was no comment made regarding the presence or absence of stool in the colon. She was admitted to the hospital and seen in consultation by a general surgeon. Admission medications included the following:

1. Ranitidine Hydrochloride,
2. Dimenhydrinate,
3. Meperidine Hydrochloride,
4. Atorvastatin,
5. Lisinopril,
6. Hydrochlorothiazide, and
7. Omeprazole.

On July 27, 2004, a CT scan of the abdomen and pelvis was performed. It was noted that the woman was unable to retain "much of" the contrast enema administered for the scan. The report noted that the colon appeared to be abnormal with shaggy wall thickening and loss of sharpness of the serosal surface. These findings were present throughout the entire colon with sparing of the cecum, rectum, and terminal ileum. There was no abnormal distention of the colon and no gas noted in the bowel wall. A moderate amount of free fluid was noted in the pelvis. The report failed to comment on the presence or absence of stool in the colon.

Stool cultures collected on July 26-27, 2004 were reported to be negative for Clostridium difficile, E. coli 0157, Salmonella, Shigella, Yersinia, and Camphylobacter. Based on the CT result, a course of 5-Acetyl Salicylic Acid was commenced. Over the next week, Meperidine Hydrochloride was administered for pain control with up to 350 mg. being given in a 24 hour period. No Meperidine Hydrochloride was given after August 2, 2004.

During the time period of July 27 – August 1, 2004, the woman's diarrhea persisted although she complained of less abdominal pain. Clinical examination of her abdomen continued to demonstrate the presence of tenderness. On August 1, 2004, the general surgeon prescribed oral Prednisone for a presumptive diagnosis of ulcerative colitis. When she developed chest congestion, cough, and fever, Azithromycin was prescribed to treat a right middle lobe pneumonia.

On August 2, 2004, the woman had a bout of chest pain which resolved spontaneously. Over the next few days, nursing documentation focused on her blood pressure and cardiac status. It was noted that her bowel movements were decreasing in frequency.

By August 3, 2004, her diet was advanced from clear fluids to a full diabetic diet. The physician noted that there was no longer blood in her stool and the woman had passed 2 loose stools in the previous 24 hours.

On August 5, 2004, the general surgeon performed a sigmoidoscopy. The report of the procedure stated that the digital rectal examination showed a "fair bit of stool". The sigmoidoscope could not be advanced very far because of the presence of stool. Small patches of rectal musoca were visualized through the stool and several biopsies were taken. These biopsies were later reported to show well preserved colonic musosa with no evidence of inflammation or other abnormality. The final pathology diagnosis was "Rectal biopsy: unremarkable". The general surgeon made the following comment: "She has had a very quick turnaround since being started on Prednisone".

On August 7, 2004, the woman was discharged home. The Committee noted that the discharge summary made no mention of constipation. Discharge medications included the following:

1. Atorvastatin,
2. Lisinopril,
3. Hydrochlorothiazide,
4. 5-Acetyl Salicylic Acid,
5. Enteric Coated Acetyl Salicylic Acid 81 mg.,
6. Metoprolol Tartrate,
7. Prednisone 30 mg./day, and
8. Glyceryl Trinitrate Patch.

In the community, the woman was followed by her family physician (FP). Within 48 hours of discharge, the woman presented to the FP's office on August 9, 2004 complaining of severe abdominal pain. The office note stated the following: "BM

– more formed no BM yesterday x1 today on effort”. The woman declined to go to the hospital for assessment. Blood work was drawn and the woman was advised to go to the ER if her symptoms worsened.

On August 10, 2004, the FP reassessed the woman and noted that her abdominal pain had resolved. Other medical issues reviewed included her blood pressure and angina. The dosage of her Prednisone was decreased to 20 mg./day.

The next office visit was on August 16, 2004 at which time it was noted that her “BM (were) 2x/day, not very hungry, some abd soreness – no severe pain”. Her blood pressure (BP) was 126/60 mm. Hg. Her medications were adjusted with the dosage of her Prednisone to be tapered to 15 mg./day on August 23, 2004.

At the next office visit on August 23, 2004, the FP documented the presence of fluctuating abdominal pain and “BM daily formed, 0 diarrhea, lots of gas, feels bloated.” The FP discussed the case with the general surgeon who had treated the woman in the GH who arranged to see her the following day.

On August 24, 2004, the FP recorded a note stating “info sent to Dr” whom the Committee suspected was a gastroenterologist (GE).

On August 25, 2004, the surgeon sent a note to the FP in which the results of the previous investigations were reviewed. The Committee could not determine if the surgeon examined the woman’s abdomen on that visit. The surgeon stated that the diagnosis was still unclear and suggested that the woman should be seen in consultation by a GE. He also noted that he was “trying to set her up for an urgent CT scan to see if there has been any appreciable change”. The surgeon went on to say that there was still a strong possibility that the woman had an ischemic bowel and, if that were the case, she would have to be cared for at the regional GH (GH #2) due to the lack of expertise at the local GH #1. The letter ended with “I will discuss further with you.”

Two weeks later on September 8, 2004, the FP reassessed the woman and noted “abd pain better overall except 1 d last week, BM 1-3x/day, energy improving, more active Abd soft, mild epigastric tenderness”. The CT scan was booked for the next day. The FP recorded that “after CT back will contact Dr. office re seeing her” (presumably the GE).

At 1000 hours on September 9, 2004, the woman took the first portion of her bowel prep which, according to the ER nursing notes recorded later that evening, resulted in a “large BM at 1400”. The second portion of the bowel prep was taken at 1400 hours. At 2000 hours, she began to vomit. Because of generalized abdominal pain and vomiting, she called the ambulance at 2130

hours. In the ER of GH #1, she was noted to have a generally distended abdomen with bowel sounds present. Initial treatment included Morphine for pain, intravenous fluids for rehydration, and being given nothing by mouth. Her regular oral medications were held and she was not administered replacement intravenous corticosteroids. Laboratory investigations were reported as follows:

1. White blood cell count – 21.0,
2. Platelets – 442,
3. Sodium – 125, and
4. Creatinine 102.

Abdominal xrays were not ordered.

On the morning of September 9, 2004, the CT scan of the woman's abdomen and pelvis was done. During the scan, the woman was unable to hold the contrast enema. The CT scan report noted the following:

1. There was a "large amount of fecal material" within the large bowel.
2. The previously noted bowel wall thickening noted on the previous scan of July 27, 2004 had resolved.
3. There was minimal induration of the pericolonic fat adjacent to the hepatic flexure.
4. There was a trace of free fluid within the peritoneal cavity which was substantially reduced from the previous scan.

The final impression was as follows: "The previously noted pancolitis has resolved since the last examination. Minimal inflammatory change is likely still present within the pericolonic fat adjacent to the hepatic flexure."

Laboratory investigation results for September 9, 2004 were reported as follows:

1. Potassium – 6.2,
2. Sodium – 126, and
3. White blood cell count – 28.0 (Increased from the previous evening).

On September 10, 2004, nursing staff noted that the woman's clinical condition had deteriorated as she was vomiting persistently and her nasogastric tube was draining "feculent material". Her white blood cell count was 22.3 and her sodium was 128. Intravenous Methylprednisolone therapy was started. She was seen in consultation by another general surgeon, the same one who had seen her in 2001. His note commented on her past medical problems as follows: "She has had multiple presentations to hospital with abdominal pain and we have attempted investigations in the past. Many of the studies have been limited by fecal loading." The report went on to state: "I think the probability is that she has

just got a fecal load in the bowel causing significant pressure. I think we will have to look at getting her cleaned out distally and see if we can release the blockage.” The surgeon did not think the woman had a toxic megacolon. The surgeon consulted another surgeon in a tertiary care centre who suggested he be recontacted “if the situation deteriorates.” Fleet and tap water enemas were ordered for that day and the following day “if necessary”.

On the morning of September 11, 2004, progress notes indicated that the woman had “2 small movements with enemas”. Later that day she passed a small stool. Her nasogastric tube continued to drain feculent material. Although her white blood cell count had decreased to 10.1, her renal function had deteriorated as evidenced by a creatinine of 185. That evening, she became hypotensive which was treated with intravenous fluid boluses.

In the early hours of September 12, 2004, the attending physician spoke with the woman and her next of kin which resulted in a “do not resuscitate” order being placed on the medical record. Another CT scan of the abdomen and pelvis was done with the following results: “The colon is quite distended with feces. The cecum is up to about 9 cm. in caliber. The feces can be followed almost all the way to the rectum. There appears to be a tiny amount of intravascular gas in the liver. There may be gas in the wall of the proximal small bowel.” The report concluded the following: “The findings described here are non-specific but worrisome. In particular, the new development of gas in (the) small bowel and liver raises the possibility of small bowel ischemia. Massive fecal loading is again detected. Colonic ischemia would also be possible.”

The woman was seen in consultation by the same general surgeon who had been involved in her care since July 2004. He noted that the woman was very ill with symptoms of a delirium, decreased urinary output, hypotension, renal failure with a creatinine of 224, and findings consistent with the presence of significant intra-abdominal pathology.

Following consultation with the attending physician and the woman’s family, the decision was made to transfer the woman to the regional general hospital (GH #2) for surgical intervention. On her arrival at GH #2, the attending surgeon recognized that she was gravely ill. Within one hour of her arrival, she was taken to the operating room. The operative note stated the following: “Ischemic/necrotic small bowel from the lig of Treitz to (the) ascending colon full thickness patchy necrosis of small bowel cecum necrotic, no pulses palpable, no peristalsis no chance for long term survival (therefore) closed, comfort measures only.”

The woman was pronounced deceased approximately 12 hours later.

The death was reported to a local coroner who ordered a post mortem examination with the following results:

1. Hemorrhagic, gangrenous necrosis of the ileum with a possible perforation,
2. Moderate dilatation of the entire colon which was packed with solid fecal material,
3. Acute peritonitis as evidenced by the presence of turbid, hemorrhagic fluid and purulent exudates in the peritoneal cavity.
4. Marked congestion of the lung parenchyma,
5. Moderately severe coronary artery atherosclerosis,
6. Moderately severe atherosclerosis of the abdominal aorta,
7. Microscopic evidence of ischemic gangrenous necrosis of the small bowel, and
8. Patent superior and inferior mesenteric arteries.

Death was attributed to “ischemic gangrenous necrosis of (the) small bowel and acute peritonitis.”

DISCUSSION

This is the case of a 77 year old woman who died of ischemic gangrenous necrosis of the small bowel and acute peritonitis secondary to constipation in the context of chronic constipation dating back to 2001.

It would appear that the woman’s terminal constipation began to manifest itself in August 2004, two months prior to her demise. Given the history of chronic constipation complicated by the onset of a diarrheal illness resulting in new onset constipation significant enough to impede the sigmoidoscopic examination of August 5, 2004, the Committee had the following questions.

1. Why did the general surgeon not consider investigations looking for causes of the woman’s constipation?
2. Did the health care professionals realize that the woman had been receiving large doses of intravenous Meperidine Hydrochloride, a drug that may have significantly contributed to and worsened her constipation?
3. Given the known anticholinergic side effects of Meperidine Hydrochloride, why was this analgesic prescribed for a woman with known chronic constipation?
4. Were the treating health care professionals aware of the Committee’s repeated recommendations regarding the use of Meperidine Hydrochloride in the elderly?

Following the woman's discharge from GH #1 on August 7, 2004, the Committee noted that she was seen by her family physician on numerous occasions. Recognizing that the woman had the complex clinical condition of colitis complicated by constipation, it would appear that the only clinical condition being monitored was her colitis and not the constipation. From the documentation submitted for review, the Committee could not determine if the family physician was aware of how much Meperidine Hydrochloride the woman had received in the hospital.

Appropriately, the family physician referred the woman back to the general surgeon on August 24, 2004 because of ongoing abdominal pain. Although the surgeon identified the ongoing possibility of an ischemic bowel and the fact that the woman's clinical condition was not improving, no further follow up for this potentially life threatening condition was carried out for almost 2 weeks when she was re-admitted to the hospital on September 9, 2004. This raised a number of questions in the Committee's mind.

1. Did the treating health care professionals realize the importance of close, ongoing monitoring of this woman's unstable, progressing, clinical condition?
2. Why were abdominal xrays not done?
3. Did the treating health care professionals realize that abdominal pain is not a symptom of colitis?
4. Was September 9, 2004 truly the earliest possible date available for a CT scan?
5. If the woman's primary general surgeon was unavailable for 2 weeks because he was away on annual leave, why was her care not transferred to another consultant?

During this 2 week period, the woman was followed by her family physician. In the Committee's mind, however, it would appear that the severity of her constipation and fecal impaction may not have been fully appreciated. The Committee suspected that the family physician was not advised that the woman's constipation was a condition that needed to be closely followed post discharge. The Committee wondered if the treating health care professionals considered the possibility that corticosteroids may have masked the severity of her progressing, abdominal condition.

During the second admission to GH #1, her abdominal pain was managed with Morphine, an analgesic with a shorter half life and less anticholinergic side effects than Meperidine Hydrochloride. Of concern to the Committee was the fact that the woman's constipation was not treated more aggressively. Her treatment appeared to be minimal with a couple of Fleet and tap water enemas,

treatments that were ineffective at best. In the Committee's mind, this raised the following questions.

1. Was the effectiveness of the enemas monitored by the health care professionals?
2. If and when the result of the enemas was recognized to be ineffective, why were more aggressive interventions not instituted?

At the time of admission to GH #2, it was the Committee's view that there was little that could be done for her. Despite a surgical attempt to emergently save her life, death occurred as the result of complications of constipation and fecal impaction.

RECOMMENDATIONS

1. The Office of the Chief Coroner should give consideration to publishing the circumstances surrounding this death in the Sixteenth Annual Report of the Geriatric/Long Term Care Review Committee to the Chief Coroner for the Province of Ontario.
2. Health care professionals should be reminded that constipation and obstipation are common, preventable, and treatable medical conditions that affect the elderly. Untreated, these conditions can be devastating and may even result in death. Once obstipation is suspected, aggressive investigation and treatment should be considered on a case by case basis.

As with many geriatric syndromes, obstipation may present either typically (abdominal pain, fecal incontinence) or atypically (confusion, delirium). Health care professionals should be especially wary of elderly patients who present with constipation/obstipation who have associated systemic symptoms (tachycardia). In these cases, the ordering of laboratory investigations and an EKG should be considered on a case by case basis.

The occurrence of overflow incontinence should alert the treating health care professionals to the possibility that the patient has developed fecal impaction with overflow incontinence. Fecal impaction can be difficult to treat and should be treated vigorously when present. Careful abdominal and rectal examinations should be performed. The finding of soft stool or no stool in the rectum does not absolutely rule out the presence of fecal impaction.

In these cases, an abdominal flat plate xray and/or a CT scan should be ordered to rule out the possibility of a higher impaction that cannot be detected on rectal examination and/or a developing acute/subacute bowel obstruction (dilated loops of bowel with air/fluid levels). While manual disimpaction should be the first intervention attempted, the presence of obstipation with a higher impaction should primarily be managed aggressively with enemas to clear the bowel from below. In some cases, the addition of oral osmotic laxatives such as Lactulose can be used to clear the bowel from above. Gastrointestinal lavage solutions have also been proven to be very effective in treating fecal impaction.

Health care professionals should always be observant for the development of complications and especially for the development of complications related to the treatment of obstipation/fecal impaction.

Reference: Constipation Can Be Deadly – Canadian Family Physician Volume 38, October 1992; Goldlist B., Naglie G., Gordon M.

3. Health care professionals should be reminded that Meperidine Hydrochloride is a narcotic that should rarely, if ever, be prescribed for the elderly because of its prolonged half life, penchant for causing and/or exacerbating delirium, and tendency to mask other symptoms. If narcotic analgesia is required, consideration should be given to using a narcotic such as Morphine Sulfate which has a shorter half life and less anticholinergic effects.
4. Health care professionals should be reminded that the use of corticosteroids can mask the severity of symptoms of disease processes especially abdominal findings. When corticosteroids are required, health care professionals should be highly vigilant for the insidious development of adverse clinical complications.
5. Health care professionals should be reminded of the importance of communicating all relevant clinical information at times of transition in the care process. For example, hospital health care professionals should ensure that all relevant clinical information is communicated to community based health care professionals at the time of discharge from the hospital.
6. Health care professionals should be reminded of the importance of close, ongoing monitoring of elderly patients with complex, unstable medical conditions.

7. Health care professionals should be reminded of the importance of providing continuity of care for elderly patients with complex care needs. Physicians especially should ensure that arrangements are made for their patients when they are away on annual leave.

CASE #3

ISSUES

1. Emergency Room Management of the Elderly.
2. The Use of Drugs in the Elderly

HISTORY

This is the case of a 73 year old woman whose past medical history included the following:

1. Chronic obstructive pulmonary disease (COPD) secondary to smoking,
2. Angina,
3. A remote subarachnoid hemorrhage which had been surgically repaired in 1995, and
4. A recent one week hospitalization for an exacerbation of the COPD. The Committee noted that she had been home for 2 weeks prior to this terminal emergency room (ER) visit and admission.

Medications being taken at home included the following:

1. Salbutamol Sulfate, and
2. Ipratropium Bromide Monohydrate.

At 1147 hours on May 10, 2004, the woman presented to the ER by ambulance with a 3 day history of diarrhea, abdominal pain, and nausea. The triage note documented the above noted symptoms, that her stools were a dark black colour, and that she had no previous history of a similar occurrence. Her history of COPD was also noted.

Her vital signs were recorded as follows:

1. Blood Pressure (BP) – 75/?,
2. Pulse (P) – 96, weak and thready,
3. Respiratory Rate (RR) – 20, and
4. Oxygen Saturation (O₂ sat) – 97%.

She was assigned a Canadian Triage Acuity Scale Score (CTAS) of 2 indicating that she was an “emergency” and needed to be assessed by a physician within 15 minutes.

About 2 hours later at 1335 hours, an intravenous (IV) of normal saline (NS) was established utilizing a #20 angiocath.

At 1405 hours, she was placed in a room.

At 1408 hours, nursing notes indicated that she had received a 500 cc. bolus of NS while awaiting placement in a room. She was noted to be alert and oriented and was continuing to complain of lower abdominal pain with a two day history of loose black stools, nausea, and no vomiting. Her IV was infusing to keep the vein open (TKVO). Bowel sounds were noted to be present.

Her vital signs were recorded as follows:

1. BP – 129/82,
2. P – 89, and
3. O₂ sat – 89% on room air.

An electrocardiogram (EKG) was to be done and she was to receive nothing by mouth (NPO).

At 1440 hours, the ER physician noted that the woman had a several day history of watery diarrhea which was occasionally soft and black which was associated with pelvic pain for which she had taken a bottle of Pepto Bismol. There was no history of fever with this illness. The absence of previous abdominal and pelvic surgery was noted. The past history of COPD and angina was recorded. Also noted was the presence of a history of low blood pressure. On physical examination, her chest was clear and her heart sounds were normal. Her abdomen was distended with bilateral lower quadrant tenderness noted on palpation. Laboratory investigations including an EKG were ordered. The 500 cc. IV bolus of NS was ordered (already given) to be followed by 100 cc. of NS to be given each hour.

At 1500 hours, the woman was up on the commode and passed a small amount of liquid brown, foul smelling stool.

At 1545 hours, nursing staff noted that the woman was awaiting reassessment.

At 1610 hours, the ER physician reassessed the woman and ordered xrays (3 views of the abdomen including a chest xray).

At 1615 hours, the woman was referred to internal medicine according to the ER record. The internal medicine consultation request was completed at 1730 hours. The provisional diagnosis was indicated as “diarrhea ? c. difficile”.

The Committee noted that the woman's xrays were done between 1655 – 1730 hours.

At 1750 hours, pericare was done. Nursing staff noted the presence of stool all over the woman and the commode.

The internal medicine consultant (internist) arrived and assessed the woman. Recorded past history included the following:

1. COPD with a 100 pack year smoking history,
2. Subarachnoid hemorrhage treated with aneurysmal clipping,
3. Angina with no history of myocardial infarction/congestive heart failure,
4. No abdominal surgery,
5. No history of hypertension,
6. No history of elevated cholesterol, and
7. No history of alcohol use.

Her regularly taken medications were noted.

Her history of present illness included a 3 day history (previously documented as a 2 day history in the nursing notes) of severe (10-15 bowel movements/day), non bloody diarrhea with nausea and crampy moderate, bilateral lower abdominal pain associated with rigors but no fever. There was no vomiting. The internist noted that the woman had recently been admitted to the GH for an exacerbation of her COPD for which she received antibiotics. Also noted was the absence of a recent travel history, contact with a sick person, and the eating of unusual foods. The woman was noted to be comfortable.

The internist noted that the woman was initially hypotensive in the ER but this had responded to a 500 cc. bolus of NS. Vital signs were recorded as follows:

1. BP – 120/80,
2. P – 84,
3. RR – 20, and
4. O2 sat – 97% on room air.

Physical findings were recorded as follows:

1. Jugular venous pulse – below the sternal angle,
2. Heart sounds – normal,
3. Ankle swelling – absent,
4. Chest sounds – severely diminished air entry bilaterally with no wheezes,

5. Abdomen – distended and tympanitic with mild bilateral lower quadrant tenderness.

The internist documented that a rectal examination had been previously done by the ER physician and was apparently occult blood negative.

It was noted that the abdominal xrays demonstrated the presence of dilated loops of large bowel with +++ stool. The laboratory investigations ordered at 1319 hours were reported as follows:

1. Hemoglobin – 180,
2. Hematocrit – 0.54,
3. Red blood cell count – 6.03,
4. White blood cell count – 30.9 with 93% neutrophils,
5. Prothrombin time – 8.7,
6. INR – normal,
7. BUN – 18,
8. Creatinine – 207,
9. Sodium – 128,
10. Potassium – 4.8,
11. Chloride – 90,
12. Total CO₂ – 20,
13. Anion gap – 18,
14. Glucose – 8.1,
15. ALT – 15,
16. AST – 25,
17. ALP – 107,
18. Amylase – 1432,
19. Calcium – 2.43,
20. Albumin – 26,
21. Bilirubin – 14,
22. CK – 40, and
23. Troponin - <0.01.

It was the internist's opinion that the woman had “ (illegible) severe c. difficile colitis and ? early toxic megacolon”. The internist noted that she was “++ sick with an elevated WBC and pre-renal failure”. The elevated amylase was unexplainable as the woman clinically did not have pancreatitis.

Recommended treatment orders written on the ER Record included the following:

1. GI (gastroenterology) consultation,
2. CT scan of the abdomen,

3. Stool cultures,
4. C. difficile screening,
5. Empiric antibiotic therapy with Metronidazole, Ampicillin Sodium, and Ceftriaxone Sodium, and
6. General surgery consultation if the patient was clinically worsening.

At 1910 hours on May 10, 2004, the woman was admitted but remained in the ER as there was no inpatient bed available on a nursing unit in the general hospital (GH). Admission orders included the following:

1. Vital signs q6h.,
2. Repeat blood work in the morning,
3. Continuation of the IV NS,
4. Admission to a nursing unit when a bed became available, and
5. Continuation of her antibiotic and usual medications.

At 2035 hours, the woman complained of nausea and vomited a small amount of undigested food for which 50 mg. of IV Dimenhydrinate was administered. She was transferred to a bed in the ERA ("Admitted Section" of the ER).

At 2300 hours nursing staff noted that the woman was resting comfortably and that she had been incontinent of a moderate amount of loose stool. NS continued to be given IV.

At 0025 hours on May 11, 2004, Dimenhydrinate 50 mg. and Meperidine Hydrochloride 50 mg. were given IV, presumably for nausea and abdominal pain.

At 0100 hours, nursing staff noted that the woman was sleeping and her IV was infusing well.

At 0235 hours, nursing staff recorded that the woman tried to get out of bed and fell. The registered nurse (RN) noted that the woman was awake, responded to questions, had no apparent injuries, and was being monitored.

At 0300 hours, the nursing note indicated that both the charge nurse and the on-call internal medicine resident (IMR) were advised of the fall. The IMR gave a verbal order for Haloperidol 5 mg. and Lorazepam 1 mg. to be given intramuscularly (IM). Both of these medications were administered.

At 0515 hours, the nursing note indicated that the woman was awake with her eyes open and was holding on to the bed side rails. She was breathing normally and appeared to be pale.

At 0550 hours, the nurse entered the room to take the morning “bloods” and found the woman to be vital signs absent (VSA). A “cardiac arrest” was called. Despite intubation and the administration of Atropine Sulfate and Epinephrine for the asystolic cardiac arrest, the resuscitation was unsuccessful and death was pronounced by the IMR. The IMR attempted to contact the woman’s family and left a message on their answering machine.

The death was reported to a coroner who commenced an investigation and ordered a post mortem examination. The pathologist concluded that death was due to (*Clostridium difficile*) pseudomembranous colitis with her chronic obstructive lung disease being a contributing factor.

DISCUSSION

This is the case of a 73 year old woman who presented to the ER of a GH at 1147 hours on May 10, 2004 with a 3 day history of diarrhea, abdominal pain, and nausea. The colour of her stools were described as “black” which, in the Committee’s opinion was most likely due to the fact that she had recently taken a bottle of Pepto Bismol and was not due to an upper gastrointestinal hemorrhage. The triage nurse assigned a CTAS score of 2 which indicated that her medical condition was “emergent” and required assessment by the ER physician within 15 minutes. As there were no beds available at the time of triage assessment, the woman was not placed into a bed until 1405 hours, 2 hours and 17 minutes later. The Committee noted that the delayed placement of emergency room patients into a bed is not an unusual occurrence in present day Ontario. In fact, many patients have assessments performed and treatments initiated prior to being placed in an ER bed. In this particular case, an IV line was inserted and a bolus of NS was administered within 1 hour and 50 minutes with good effect. Her blood pressure rose and her pulse dropped and she remained hemodynamically stable for the duration of her hospitalization. In the Committee’s opinion, the delay in placing this woman in a bed played no role in her death.

The ER physician conducted a comprehensive assessment which was accurately documented except for the history of recent antibiotic use and the result of the rectal examination. The consultant internist’s note confirmed that this information was known and the rectal examination was performed. Appropriate initial investigations were ordered. In addition, the consultant internist ordered stool cultures and a *C. difficile* toxin assessment, the results of which would not have been available prior to the woman’s demise. From the time of the ER physician’s initial assessment, the woman had stable vital signs and no evidence of cardiorespiratory distress.

In the Committee's opinion, the fact that the duration of the woman's pre-hospital symptoms varied between 2-3 days was of no significant in the eventual outcome.

The woman was admitted to the GH at 1910 hours on May 10, 2004. As there was no inpatient bed available on a hospital nursing unit, she continued to be managed in the ER and was eventually transferred to the ERA.

At 0235 hours on May 11, 2004, nursing staff documented that the woman sustained a fall while attempting to get off her ER stretcher which the Committee noted was higher than a regular hospital bed. Apparently there were no injuries incurred as a result of the fall. The Committee noted that the woman had previously been given 2 doses of Dimenhydrinate 50 mg. and 1 dose of Meperidine Hydrochloride 50 mg. Nursing staff noted that the woman did not appear to be confused.

The charge nurse and the IMR were advised of the fall which resulted in the verbal ordering on the antipsychotic Haloperidol 5 mg. and the anxiolytic Lorazepam 1 mg. to be administered IM. The rationale for the choice and dosage of these medications was never recorded on the medical record.

From the documentation submitted for review, the Committee could not determine if the treating health care professionals recognized the risks associated with the administration of Dimenhydrinate, Meperidine Hydrochloride, and Haloperidol, all of which have anticholinergic side effects which can aggravate bowel dilatation, cause hypotension, and increase cardiac irritability because of an increased autonomic response.

While this woman's death was both sudden and unexpected and occurred just 35 minutes after her last nursing assessment, the Committee was not convinced that closer monitoring would have resulted in a more favourable outcome.

RECOMMENDATIONS

1. When using psychoactive drugs in the ill elderly, the lowest dose possible should be the initial dose and further doses titrated upwards depending on the response unless there is convincing evidence that a higher dose is necessary because of compelling clinical considerations (i.e. acute delirium) which puts the patient at extreme risk and requires rapid intervention to eliminate the associated agitation which might interfere with medical care.

2. Health care professionals prescribing “prn” psychoactive medications for the agitated, immobilized elderly should be reminded of the importance of specifying what the “prn” medication is to be given for.
3. Health care professionals should be reminded that the prescribing of medications with anticholinergic properties to dehydrated, critically ill elderly patients may result in an exacerbation of their clinical condition including death.

For example, the prescribing of medications with anticholinergic side effects such as Dimenhydrinate, Meperidine Hydrochloride, and Haloperidol in an elderly patient with hypovolemic related large bowel disease may result in bowel dilatation and increased cardiac irritability because of an increased autonomic response.

4. The Office of the Chief Coroner should give consideration to publishing the circumstances surrounding this death in the Sixteenth Annual Report of the Geriatric/Long Term Care Review Committee.

CASE #4

ISSUE

1. Admission/Discharge/Transfer Procedures

HISTORY

This is the case of a 64 year old gentleman who was an university professor for 25 years. His past medical diagnoses included the following:

1. Paranoid schizophrenia diagnosed in his twenties,
2. A 20 year history of type 2 diabetes mellitus which was difficult to control,
3. Bilateral cataracts with impaired vision,
4. Hypertension,
5. A benign, parotid gland (Warthin's) tumour,
6. Atrial fibrillation,
7. Chronic obstructive pulmonary disease,
8. Recurrent bouts of pneumonia, and
9. A left sided, cerebellar, pontine infarct in November 2002. MRI examination demonstrated the presence of microvascular damage to other areas of his brain as well.

Over the last 25 months of his life, the gentleman had 6 admissions to health care institutions which were sequenced as follows:

1. Admission to a general hospital psychiatric unit from May 31, 2002 to July 2, 2002,
2. Admission to a licensed long term care facility (LTCF) from April 30, 2003 to May 23, 2003. Diagnoses included dementia, supranuclear palsy, and diabetes mellitus. He was discharged following an assault on LTCF staff.
3. Admission to a general hospital (GH #1) on a Form 1 from May 23, 2003 to May 29, 2003,
4. Admission to the psychiatric unit (PU) of GH #2 from May 29, 2003 to March 31, 2004 (10 months),
5. Admission to the psychogeriatric service of a psychiatric hospital (PH) located in a smaller community some distance from their local community from March 31, 2004 to June 22, 2004 (3 months), and
6. Admission to a general hospital in the smaller community from June 22, 2004 to July 5, 2004.

The Committee noted that the care concerns expressed by the gentleman's wife related to the 10 month admission to the PU of GH #2 on May 29, 2003 and the 3 month admission to the PH from March 31, 2004 to June 22, 2004.

On May 23, 2003, the gentleman was admitted to GH #1 on a Form 1. Apparently he had grabbed 2 nurses and put them in headlocks. When the police arrived, he tried to grab the officer's firearm. He had only been in the LTCF for about 1 month. Within 6 days, he was transferred to the PU of GH #2 where he remained until he was admitted to the PH on March 31, 2004. During this time period, he received detailed and comprehensive management for his psychosis, cognitive decline, and neurologic challenges. Careful "Care Plans" were developed which included support visits with his wife, home and regular re-assessments, team conference meetings, and meetings with his wife. It is noteworthy that the psychiatrist in this facility regularly involved and tried to assuage the fears, frustration, and requests of the gentleman's wife. His discharge diagnoses included the following:

1. Progressive supranuclear palsy,
2. Organic brain syndrome, and
3. Schizophrenia schizoaffective disorder.

On March 31, 2004, the gentleman was admitted to the PH which was located in a smaller community some distance away from his home. The admission was apparently to await placement in a LTCF. PH staff noted that he:

1. Required assistance with standing,
2. Required a walker to ambulate,
3. Was incontinent of urine, and
4. Was intermittently drowsy.

Medications taken during this hospitalization included the following:

1. Risperidone 1 mg. bid.,
2. Venlafaxine Hydrochloride 112.5 mg. od.,
3. Loxapine Hydrochloride 7.5 mg. bid. and prn.,
4. Trazodone Hydrochloride 25 mg. bid., 25 mg. prn., and 50 mg. qhs.,
5. Novolin 30/70 14 units qam.,
6. NPH Insulin 12 units qhs.,
7. Metformin Hydrochloride 1 gm. bid.,
8. Acetyl Salicylic Acid 81 mg. od.,
9. Ramipril 2.5 mg. od.,
10. Multivitamins and Minerals 1 tablet od.,
11. Ipratropium Bromide/Salbutamol Sulfate 2 puffs q4h. prn.,

12. Lactulose 50 od. prn.,
13. Magnesium Hydroxide 30 cc. od. prn.,
14. Acetaminophen 325 mg. 2 tablets q4h. prn., and
15. Hydrochlorothiazide 25 mg. od.

Within 24 hours of admission to the PH, the gentleman informed his wife that he had been given junk food and cigarettes which prompted her to initiate several telephone calls to staff to question this information. The Committee noted that this was the initial indicator of the wife's inability to assess the veracity of her husband's memory and statements to her. A family meeting was arranged within a day of admission as the wife had expressed a wish for her husband to come home for Easter (within a few days) despite the observations of his inability to manage prolonged home visits which had been noted on the previous psychiatric hospitalization in the sending city. It was noted that his level of alertness appeared to vary depending on the time of day, blood sugars, and medications. Staff noted that the presence of high blood sugars and the holding of medications such as Trazodone Hydrochloride resulted in the gentleman becoming more aggressive. Falls were noted on April 10th and 12th, 2004.

On April 15, 2004, staff noted that the gentleman was more confused and had some shortness of breath with ankle swelling. A chest xray was clear with some markings suggestive of the presence of bronchitis. The gentleman requested extra time to snooze and seemed slightly less ambitious but he did get up for supervised walks. The wife called several times that day to express her concern that an xray was being done as he had had 8 xrays in the last 7 months. In addition, she was upset that he was snoozing and not receiving enough stimulation.

On April 20, 2004, the gentleman developed a fever with symptoms suggestive of the presence of a pneumonia. Because of a decreased level of alertness, the dosages of his medications were reduced and antibiotic therapy with Moxifloxacin Hydrochloride was commenced on April 25, 2004. The illness resulted in the elevation of his blood sugars which subsequently resulted in a bout of an insulin related hypoglycemia which was recognized and appropriately managed.

On May 12, 2004, the gentleman developed peri-coccygeal excoriations presumably due to the antibiotic related diarrhea. This observation was initially made by his wife.

Soon thereafter, staff noted that the gentleman had an ineffective cough which resulted in the diagnosis being made of a pneumonia for which the antibiotic Cefprozil was prescribed for 10 days. The wife insisted that her husband

developed the pneumonia because PH staff curtailed her ability to take him out of the PH and that the temperature in the PH unit was too hot.

The Committee noted that the gentleman intermittently received antibiotics for the duration of his stay in the PH because of ongoing chest congestion. On one occasion when he had been drowsy which resulted in the holding of his medications, the gentleman grabbed a nurse by the throat while he was being fed. The nurse scolded him which resulted in the nurse being released. Appropriate, further radiologic investigations were conducted. During this time period, the attending physician regularly examined the gentleman, discussed the gentleman's clinical progress with staff, and appropriately altered therapeutic interventions.

On May 24, 2004, nursing staff noted that the gentleman had rattling respirations after eating and had slightly cyanotic finger beds. He was unsuccessfully suctioned. By now, the gentleman required bed rest and oxygen therapy. It would appear that the presence of an urinary tract infection was suspected. The wife expressed concern that her husband had developed an aspiration pneumonia. The attending physician was advised, examined the gentleman, and prescribed Clindamycin Hydrochloride bid from June 4 to 16, 2004.

On June 21, 2004, nursing staff recorded the gentleman's vital signs as follows:

1. Temperature – elevated at 38.6° C,
2. Pulse – increased at 150 bpm.,
3. Respiratory rate – increased at 48 breaths per minute, and
4. Blood pressure – 121/75 mm. Hg.

On June 22, 2004, nursing staff noted that the gentleman's clinical status appeared to have worsened which resulted in the prescribing of the antibiotic Ceftriaxone Sodium. By the afternoon, staff noted that his clinical condition had further deteriorated with the development of cyanosis, diaphoresis, and decreased responsiveness. When the wife was contacted by telephone to advise her of her husband's clinical deterioration, the wife hung up on the health care staff.

At 1500 hours of June 22, 2004, the gentleman was transferred to the community general hospital where he was admitted to the intensive care unit (ICU) with the following vital signs:

1. Blood pressure – 72/55 mm. Hg.,
2. Pulse – 121 bpm., and
3. Oxygen saturation – 68%.

Therapeutic interventions included the prescribing of Ceftriaxone Sodium and Gatifloxacin. He was started on BiPap followed by endotracheal intubation. His electrocardiogram demonstrated the presence of a right bundle branch block. Laboratory investigations were reported as follows:

1. Creatinine – 68,
2. pO₂ - 71.4,
3. pCO₂ - 91,
4. pH – 7.076,
5. Hemoglobin – 150, and
6. White Blood Cell Count – 18.8.

On June 23, 2004, the gentleman's clinical condition appeared to be improving which resulted in him being weaned to CPap. The presence of a decubitus ulceration was deemed to potentially require surgical intervention in a tertiary care centre. The Committee noted that the complete medical record from this terminal hospitalization was not submitted for review.

From the Coroner's Investigation Statement, the Committee noted that the gentleman was discharged from the ICU to a ward bed where, on July 5, 2004, his clinical condition suddenly declined and death was pronounced.

The death was reported to a coroner who commenced an investigation and ordered a post mortem examination which indicated that the gentleman died as the result of a cardiac arrhythmia due to atherosclerotic coronary artery disease including triple vessel coronary artery disease with an 80% focal occlusion. Contributing factors included bilateral pulmonary effusions with adhesions, Parkinson's disease, diffuse nodular renal glomerulosclerosis (Kimmelsteil Wilson Disease), and a decubitus ulceration.

DISCUSSION

This is the case of a 64 year old gentleman who was an university professor for 25 years. His past medical and psychiatric history was extensive and appeared to be well managed. Over the last 25 months of his life, the gentleman required 6 admissions to health care institutions to assess and manage his deteriorating clinical status. Two of these admissions resulted in concerns being expressed by his wife relating to the overall care provided in the PU of GH #2 and in a PH located in a smaller community some distance from their local community.

A review of the gentleman's neurologic consultations revealed that the following assessments were performed:

1. In February 2001, the presence of atrophy of the right upper extremity with extensive fasciculations and mild fasciculations in the other limbs, in the absence of ataxia, was noted. The presence of a motor neuron disease was questioned.
2. In December 2001, a neurologist noted the presence of a bilateral tremor associated with a shuffling gait.
3. In June 2002, a second neurologist noted the presence of rigidity and bradykinesia without ataxia and a short stepped gait. A progressive supranuclear palsy was ruled out on this evaluation. The presence of a Lewy Body Demetia was suggested.
4. In July 2002, the second neurologist re-assessed the gentleman and questioned the presence of a frontal temporal dementia.
5. On October 29, 2002, the second neurologist prescribed Donepezil Hydrochloride, a cholinesterase inhibitor.
6. In June 2003, a psychiatrist specializing in mood and anxiety disorders was of the opinion that the gentleman was not depressed.
7. In March 2004, the same psychiatrist diagnosed a depression and prescribed Venlafaxaine Hydrochloride.
8. In June 2003, a neurologist concurred with the diagnosis of a frontal lobe impairment in the context of the presence of a vascular dementia. The neurologist felt that a Lewy Body Dementia was less likely.
9. In July 2003, a speech language pathologist (SLP) noted that the gentleman's swallowing was intact but he tended to eat impulsively and rapidly with reduced airway protection. The SLP recommended that the gentleman be supervised for all meals.
10. Following a fall in July 2003, the presence of narcolepsy and cataplexy was considered but a sleep study ruled these diagnoses out. A consultant sleep specialist speculated that the fall may have been due to Quetiapine Fumarate. Because the gentleman's symptoms were not well controlled with this medication, Risperidone was prescribed. At a dosage of Risperidone 6 mg. the gentleman developed significant shuffling with a rigidity tremor and cogwheeling. However, his delusions of nameless, social crimes were extinguished.

Having noted all of the above assessments and recommended therapeutic interventions, the Committee was impressed with the quality of neurologic and psychiatric investigations provided in an attempt to assess and manage the gentleman.

In relation to the wife's concerns relating to the development of her husband's pressure ulceration, the Committee noted the following:

1. On May 12, 2004, nursing staff noted that the wife discovered that her husband's "rectal area is excoriated and bleeding". Apparently nursing staff made the same observation that morning during AM care and attributed the finding to the presence of several loose stools. The Committee could not determine if this was truly a rectal excoriation due to loose stools and/or the presence of the sacral decubitus ulceration. The Committee also noted that this was the first documentation related to this problem.
2. On May 13, 2004, nursing staff noted that the gentleman had an open area over his coccyx with a small amount of bleeding. The wound was cleansed and dressed. The attending physician's note confirmed the findings recorded in the nursing notes.
3. On May 19, 2004, the attending physician noted that the gentleman's pressure sore was large. Nursing notes recorded that the decubitus ulceration was large at 8 cm. and was being managed with daily cleansings and dressings, positioning, and pressure relieving devices.
4. On June 8, 2004, nursing notes recorded that the decubitus ulceration was 4 cm. x 4 cm. x 4 cm. The attending physician recorded that the ulceration was 6 cm. x 8 cm. x 2 cm. deep with significant undermining of 5 cm. in all directions. The enlargement of the decubitus ulceration was attributed to:
 - a) decreased physical mobility related to dementia and physical illness,
 - b) poorly controlled diabetes mellitus,
 - c) poor oxygenation secondary to vascular compromise, and
 - d) bladder and bowel incontinence. And
5. Documentation by all the health care disciplines (medicine, nursing, social work, and physiotherapy) suggested that the wife was having considerable difficulty coping with the magnitude of her husband's illness, especially given the distance of her husband's location in relation to her residence which limited her ability to visit.

The Committee noted that the health care professionals comprehensively documented the gentleman's complicated clinical deterioration over a prolonged period of time. His death due to a cardiac event in the presence of a severe infection (pneumonia, septicemia, and decubitus ulceration) was an unexpected event. The Committee noted that the gentleman's clinical status appeared to be improving prior to this terminal cardiac event. His status and recovery from the known illnesses was in fact improving. His management was further complicated by the presence of his underlying psychiatric illness with abnormal behaviours.

The Committee also noted that the gentleman's wife had considerable difficulty in understanding and accepting the reality of her husband's clinical deterioration and the necessity of many of the investigations and therapeutic interventions prescribed. In the Committee's opinion, the health care team's interventions were entirely appropriate. In fact, the health care professionals carefully considered the wife's requests even though these requests appeared to be incongruent with the husband's clinical status.

There can be no doubt that the gentleman's transfer to a PH in a community located some distance from his residence created additional stress for the gentleman, his wife, and the treating health care professionals. The Committee noted that this issue is not uncommon in present day Ontario and is an example of systemic pressures that are counterproductive to the continuity of care necessary for the provision of quality, ongoing care and support of family members and patients awaiting placement in an appropriate long term care facility bed.

RECOMMENDATIONS

1. The Office of the Chief Coroner should give consideration to publishing the circumstances surrounding this death in the Sixteenth Annual Report of the Geriatric/Long Term Care Review Committee to the Chief Coroner of the Province of Ontario.
2. The Ministry of Health and Long-Term Care should be reminded of the high human cost of dislocating elderly patients from their family and friends while awaiting appropriate and safe long term care placement.

CASE #5

ISSUES

1. Medical/Nursing Management
2. Emergency Room Management of the Elderly

HISTORY

This is the case of a 73 year gentleman who independently lived with his wife in the community in their own home. His medical diagnoses included the following:

1. Osteoarthritis,
2. Hypertension,
3. Hyperlipidemia,
4. A spinal fusion in 1984, and
5. Skin grafting to the left leg secondary to a motor vehicle crash in 1990 at which time he underwent an open reduction and internal fixation of a fractured left tibia.

On March 3, 2004, he underwent a right knee arthroplasty in a general hospital (GH #1). His preoperative medications included the following:

1. Triazide 1 tablet od.,
2. Methyldopa 250 mg. tid.,
3. Simvastatin 20 mg. od.,
4. Diclofenac Sodium/Misoprostol 50 mg. tid., and
5. Acetaminophen 325 mg. prn.

Preadmission laboratory investigations were reported as follows:

1. Hemoglobin – 142,
2. White blood cell count – 4.2,
3. Electrolytes – normal,
4. Renal indices – normal,
5. Blood sugar – normal, and
6. Oxygen saturation (O₂ sat.) – 96% on room air.

The operative procedure appeared to be uneventful. Cefazolin Sodium 1 gm. IV. q8h. was prescribed at the time of the surgery.

On March 4, 2004, the gentleman's temperature was recorded at 38.0°C on three separate occasions. His O₂ sats were measured at 96 – 98% although it was unclear if supplemental oxygen was being administered.

The physiotherapy assessment completed on March 4, 2004 commented that the gentleman was at risk for respiratory and circulatory compromise. It was noted that he was taking some steps with assistance and a walker. A complete blood count (CBC) was ordered but the results were not included in the documentation submitted for review. At midnight, his temperature was 38.0°C. Three additional temperatures ranging from 36.5°C – 37.1°C were recorded overnight and into the following morning.

On March 5, 2004, the gentleman was discharged to the long term care/retirement facility (LTC/RF). The discharge summary dictated by the attending surgeon read as follows:

“The patient was admitted on March 3, 2004 for diagnosis of osteoarthritis of the right knee. A right total knee arthroplasty was performed and the patient was discharged on March 5, 2004 in satisfactory condition”.

On admission to the LTC/RF, thorough nursing, rehabilitation, and medical assessments were conducted. The comprehensive medical assessment was negative for respiratory, gastrointestinal, genitourinary, and other symptoms. Admission vital signs were recorded as follows:

1. Temperature – 38.5°C,
2. Pulse – 96 (had been 55-66 preoperatively), and
3. O² sat – 88% on room air (improved to 95% with oxygen by nasal prongs).

A chest xray was done to look for a source of the suspected infection. His hemoglobin ranged between 99 – 107 and his white blood cell counts were reported to be in the normal range on 5 occasions between March 5 – 19, 2004. A 10 day course of Keflex 500 mg. qid. was prescribed.

On March 6, 2004, the gentleman's temperature was 36.6°C. On the next day, his temperature was 38.5°C.

On March 8, 2004, his vital signs were recorded as follows:

1. Temperature – normal,
2. Pulse – 72,
3. O² sat – 94% on room air.

On admission, the gentleman's medications included the previously listed medications, Dalteparin Sodium 5000 units sc. q24h., and the following “prn” medications.

1. Docusate Sodium 100 mg. bid.,
2. Ferrous Fumarate 300 mg. od.,
3. Multivites 2 tablets od.,
4. Dimenhydrinate,
5. Diphenhydramine Hydrochloride,
6. Acetaminophen plain,
7. Acetaminophen with Codeine 30 mg.,
8. Milk of Magnesia,
9. Bisacodyl suppository,
10. Sodium Phosphates enema, and
11. Serax.

Only the Acetaminophen plain was administered during the admission to the LTC/RF.

No focus of infection was found. His VRE and MRSA screens were reported to be negative.

Over the next few weeks, the gentleman appeared to respond well to therapy as he was able to:

1. Ambulate independently with a wheeled walker,
2. Transfer by himself, and
3. Transfer by himself into the bath tub to bathe.

Regular medical assessments were performed and progress notes were recorded almost every day.

The gentleman remained medically stable until March 25, 2004 when he developed loose bowel movements. A medical examination was done with no abnormal physical findings noted. The Docusate Sodium and Multivitamins were discontinued. Stool samples were ordered for culture and sensitivity (C+S) and ova and parasites (O+P). A screen for Clostridium difficile (C. diff) was not ordered at this time. It was noted that his status appeared to be stable and that he was eating well.

On March 27, 2004, the gentleman's temperature was noted to be 38.1°C in the afternoon and he had 2 loose bowel movements.

On March 28, 2004, his temperature was recorded at 38.3°C and, later that day, at 38.7°C. He had 2 small bowel movements wherein he passed "normal stool". The on-call physician ordered another set of stools for C+S and O+P. Loperamide Hydrochloride was prescribed.

On March 29, 2004, the gentleman was noted to have shivers, chills, and a temperature of 38.3°C. The attending physician noted the absence of loose bowel movements. Physical examination detected the presence of crackles in the right lung base and a benign abdomen. The possibility of the presence of C. diff was considered. Orders were recorded as follows:

1. Push fluids,
2. Discontinue the Loperamide Hydrochloride,
3. Complete blood count,
4. Stool culture for C. diff, and
5. Metronidazole 500 mg. tid. for 10 days after the stool culture was obtained.

On March 30, 2004, the attending physician reassessed the gentleman noting the presence of a temperature of 39.0°C, lethargy and diaphoresis. Left lower quadrant tenderness was detected on abdominal examination. Laboratory investigations were reported as follows:

1. Hemoglobin - 117, and
2. White blood cell count – 11.2.

The diagnosis of sepsis was made, possibly of gastrointestinal origin. The gentleman was transferred to an acute care facility.

On March 30, 2004, the gentleman was admitted to general hospital #2 (GH #2) with the diagnosis of C. diff diarrhea. His temperature was 38.3°C and he was felt to be dehydrated. Investigations revealed the following:

1. Vital signs – normal,
2. White blood cell count – 14.0.
3. Abdominal xrays – normal, and
4. Stool culture for C. diff – positive.

Treatment included rehydration and continuing the Metronidazole. His clinical condition rapidly improved which resulted in him being transferred back to the LTC/RF on April 7, 2004.

On readmission to the LTC/RF, the Metronidazole therapy was continued for a further 3 days to complete the 10 day course of therapy. Initially, the gentleman appeared to be functionally stable. He was afebrile and was independently mobile with a walker with only minimal assistance. Laboratory investigations were reported as follows:

1. Hemoglobin – 121, and
2. White blood cell count – 13.2

On April 14, 2004, the gentleman had loose bowel movements for which a further 10 day course of Metronidazole was prescribed. He was noted to have peripheral edema in both legs.

On April 19, 2004, the medical progress note stated that the gentleman had no further loose bowel movements but had increasing edema of both legs. Physical examination was reported to be unremarkable. Laboratory investigations were reported as follows:

1. Hemoglobin – 86, and
2. White blood cell count – 2.8.

The Metronidazole was discontinued (after 5 days of treatment) due to the concern that these laboratory results may have been medication related.

On April 20, 2004, the gentleman was seen in follow-up at the orthopedic clinic of GH #1 at which time it was felt that he was doing well in relation to his arthroplasty.

On April 21, 2004, the attending physician noted the presence of normal stools with no loose bowel movements for several days.

On April 23, 2004, a rectal examination noted the presence of external hemorrhoids and soft stool. Repeat laboratory investigations performed on April 21 and April 27, 2004 were reported as follows:

1. Hemoglobin – 84 and 82, and
2. White blood cell count – 3.4 and 9.5.

On April 26, 2004, the gentleman was noted to have a cough with a temperature of 38.7°C.

On April 27, 2004, the attending physician examined the gentleman and queried the diagnosis of a right lower lobe pneumonia. Lab work including blood cultures and a chest xray were ordered. A 7 day course of Levofloxacin 500 mg. od. was prescribed. During the morning, the gentleman became more lethargic and had poor fluid intake which resulted in him being transferred to the emergency room of general hospital #3 (GH #3) just after the noon hour. The hand written physician's notes were difficult to interpret. Laboratory investigations were reported as follows:

1. Hemoglobin – 97,
2. White blood cell count – 14.8,
3. Blood sugar – normal,
4. Creatinine – normal, and
5. Chest xray – no acute process.

His vital signs remained stable and nursing staff noted that he was in no acute distress and was resting comfortably. At 2000 hours, less than 12 hours after his arrival in the emergency room, the casualty officer discharged the gentleman back to the LTC/RF with the recommendation to continue the Levofloxacin. At 2400 hours a nursing note indicated that the patient had a “liquid black stool”. From the documentation submitted for review, the Committee could not determine if this information was given to the physician. In any event, it would appear that no action was taken in this regard. The Committee noted that the fact that the gentleman was taking Ferrous Fumarate daily was available to the emergency room staff.

On April 28, 2004, nursing notes documented that the gentleman had a number of loose bowel movements. His temperature fluctuated between 36.5°C and 38.0°C. It was noted that he was eating well but complained of fatigue. Additional stool specimens were collected.

On April 29, 2004, the gentleman had 7 watery bowel movements for which he was placed on a clear fluid diet. Vital signs and laboratory investigations were reported as follows:

1. Pulse – 72,
2. Respiratory rate – 20,
3. Temperature – 36.4°C,
4. Blood pressure – 105/60,
5. Hemoglobin – 108,
6. White blood cell count – 18.8,
7. Platelets – 434,
8. Sodium – 136,
9. Potassium – 4.3,
10. Creatinine – 112, and
11. Culture for C. diff – positive.

The attending physician queried if the gentleman had “? pneumonia” and “prob. C-difficile gastro”. Vancomycin Hydrochloride 125 mg. po. qid. was prescribed.

On the morning of April 30, 2004, the gentleman complained of feeling dizzy. The attending physician noted the presence of loose bowel movements and that

the Vancomycin Hydrochloride had just been started that morning. On physical examination, his pulse was 72 and his abdomen was “soft, non-tender. BS normal”. The diagnosis was recorded as “prob. C-difficile gastro, ? pneumonia – clearing”. That evening, his clinical condition deteriorated with vital signs recorded at 1945 hours as follows:

1. Temperature – 35.6°C,
2. Pulse – 60,
3. Respiratory rate – 20,
4. Blood pressure – 100/70, and
5. O² saturation – 90%.

He was noted to be cold, clammy, and sweating profusely. 911 was called and he was transferred to the emergency room of GH #1. The gentleman's son advised nursing staff that his father was having non-bloody diarrhea at the LTC/RF. His initial blood pressure was 90/60 which improved to 133/91 following rehydration. At 2345 hours, the physician recorded that the abdominal exam was “soft, non tender, no masses”.

Laboratory investigations were reported as follows:

1. Hemoglobin – 137,
2. White blood cell count – 47,000,
3. Sodium – 127,
4. Potassium – 4.2,
5. Creatinine – 170,
6. Albumin – 21,
7. EKG – no acute changes.

The admitting diagnoses were “C. difficile diarrhea with dehydration and pre-renal failure”. Initial therapy included intravenous fluids and Metronidazole.

A few hours after being transferred to the hospital ward, he developed laboured breathing, wheezing, and generalized distress. His O² saturation was 82% on oxygen at 3 Liters/minute. Shortly thereafter, he suffered a cardiopulmonary arrest which did not respond to aggressive resuscitative measures.

Death was pronounced at 0945 hours on May 1, 2004.

A post mortem examination was performed which listed the cause of death as “perforated peptic duodenal ulcer disease”. Contributing factors included “ischemic heart disease” and “pseudomembranous colitis”. Peritonitis associated with the perforation with a loculated subphrenic abscess was noted. The report

went on to state that “Death is multifactorial including sepsis associated with perforated peptic ulcer, severe pseudomembranous colitis, all of which compromised the decedent’s ischemic heart disease”.

DISCUSSION

This is the case of a 73 year old gentleman who had an elective right knee arthroplasty on March 3, 2004. Despite intraoperative antibiotic prophylaxis, he developed a fever postoperatively which necessitated the prescribing of additional antibiotics. Two (2) days postoperatively, he was discharged to a LTC/RF where, on admission, he was noted to be febrile. The Committee wondered whether bed pressure for early discharge may have played a role in the discharge from the acute care setting of an unstable postoperative patient. The Committee recognized that the gentleman was being transferred to a health care facility where nursing and medical supervision was provided.

Initially in the LTC/RF, the gentleman’s clinical condition appeared to stabilize until March 25, 2004 when he developed loose bowel movements and a fever. He was regularly assessed and had appropriate investigations. There was a high index of suspicion that his symptoms were due to C. diff infection for which treatment was initiated in the LTC/RF. When he did not respond as expected, transfer to GH #2 was arranged where he remained from March 30 to April 7, 2004. Treatment provided in GH #2 included rehydration and continuation of the Metronidazole.

Upon readmission to the LTC/RF, the gentleman’s clinical condition remained stable during the next week. When he redeveloped loose bowel movements on April 14, 2004, a further 10 day course of Metronidazole was appropriately prescribed. The presence of peripheral edema and a drop in his hemoglobin and white blood cell count resulted in the discontinuation of the Metronidazole. From the documentation submitted for review, the Committee could not determine if other causes for these abnormal laboratory results were considered.

The development of fever and respiratory symptoms on April 26 – 27, 2004 resulted in the prescribing of an antibiotic. When his clinical status did not improve, he was transferred to the emergency room (ER) of GH #3. In the ER, he passed a black stool. The Committee could not determine if this information was relayed to the attending physician who had already written the order for discharge back to the LTC/RF. The discharge instructions were to continue on with the treatment plan already being done in the LTC/RF.

Given that the gentleman was managed in 3 separate acute care general hospitals during the course of his illness, the Committee wondered whether

fragmentation of care may have contributed to less than optimal availability of information and development of the treatment plan. The Committee also wondered if mechanisms need to be reassessed to ensure that all relevant clinical information is brought to the attention of attending physicians at the time of discharge from the emergency room.

Over the next 2 days, the gentleman had more diarrhea. Treatment was restarted for the presumptive diagnosis of C. diff colitis. When his clinical condition deteriorated, he was readmitted to hospital where he suffered a cardiac arrest shortly after admission.

The diagnosis of ischemic heart disease had not previously been made in this gentleman although he did have a long history of hypertension and hyperlipidemia. The diagnosis of a perforated duodenal ulcer with peritonitis and a subphrenic abscess was only made at the time of the post mortem examination. The Committee was not surprised by the fact that the perforated duodenal ulcer was not recognized antemortem. Frequently, elderly patients with serious illness will present atypically. When the gentleman's hemoglobin dropped to 86 on April 19, 2004, the Committee wondered why the treating health care professionals didn't consider conducting more aggressive investigation to identify the cause of the lowered hemoglobin.

RECOMMENDATIONS

1. The Office of the Chief Coroner should give consideration to publishing the circumstances surrounding this death in the Sixteenth Annual Report of the Geriatric/Long Term Care Review Committee to the Chief Coroner for the Province of Ontario.
2. Health care professionals should be reminded that disease presentation in the elderly is frequently atypical and may vary greatly from patient to patient. A subtle change in a patient's clinical status may well indicate that something serious is going on which may not be readily apparent. The underlying cause(s) of these atypical presentations may be missed if the investigator does not obtain an appropriate history, conduct a thorough examination, and judiciously utilize available laboratory and imaging resources.

For example, the development of an unexpected and unexplained drop in hemoglobin in an elderly patient may be an indication of a serious medical illness such as a gastrointestinal bleed due to a silent perforation of a peptic ulcer.

3. Acute care general hospitals should be reminded of the importance of utilizing clear guidelines and/or criteria based discharge protocols for elderly postoperative patients who are being discharged early.
4. Emergency room health care professionals should be reminded of the importance of ensuring that all relevant clinical information is directly communicated to the attending physician prior to an elderly patient's release from the emergency room.

For example, the passing of black stools which occurs after the discharge order has been written and prior to patient leaving the emergency room should be directly communicated to the attending physician.

5. Given that the elderly frequently have multiple medical diseases that may affect multiple organ systems, health care professionals should be reminded of the importance of conducting a comprehensive assessment especially if the elderly patient's response to treatment is not what was expected.
6. Health care professionals should be reminded of the importance of providing continuity of care to their ill elderly patients. This is especially important when an ill elderly patient is receiving care from multiple acute care health institutions.

CASE #6

ISSUES

1. Medical/Nursing Management of elderly patients with abnormal behaviours.
2. Integration of Services Issues.

HISTORY OF THE DECEASED

On September 23, 2002, this 89 year old woman was admitted to an acute care general hospital at age 87 years after having fallen at home resulting in severe pelvic pain and the inability to bear weight on her right leg. Although xrays were reported to be negative for the presence of a fracture, a bone scan demonstrated the presence of multiple fractures.

Prior to the fall, the woman resided in the community with family members. Medications taken included the following:

1. Furosemide 40 mg. od.,
2. Pantoprazole Sodium 40 mg. od.,
3. Salbutamol Sulfate,
4. Atenolol,
5. Calcium Carbonate/Etidronate Disodium,
6. Maxeran 10 mg. tid., and
7. Ferrous Gluconate 300 mg. od.

In hospital, she developed hematemesis, melena and anemia (hemoglobin – 108) which was managed conservatively. She developed acute renal failure with a creatinine of 174. Medical management resulted in her creatinine decreasing to 131 in January 2003 and to 146 in December 2003. She also developed a stage 2 pressure ulcer over her coccyx. Functionally, she was able to walk with a walker but preferred to be assisted by one staff person. She was noted to be incontinent. On October 18, 2002, she scored 27/30 on a Mini Mental Status Examination (MMSE). The Committee noted that the woman was not demented. Other medical diagnoses included the following:

1. Chronic obstructive pulmonary disease,
2. Gastro-esophageal reflux disease,
3. Chronic peptic ulcer disease with a hemorrhage and no evidence of an obstruction,
4. Congestive heart failure, and
5. Essential hypertension.

On October 16, 2002, the woman was transferred to the Continuing Care Section of the general hospital (GH).

On December 13, 2002, the woman was admitted to a licensed long term care facility (LTCF). A review of the LTCF medical record revealed that there were very few ongoing nursing and medical issues over the next 16 months.

On April 9, 2004, a nursing note indicated that the woman was grabbed and had her hair pulled by a male resident in her room.

At 1845 hours on June 29, 2004, nursing staff found the woman lying on her back on the floor. She complained of a sore left shoulder and left knee. At 1930 hours, she was transferred to the emergency room (ER) of the GH where she was diagnosed to have a comminuted fracture of the head of her left humerus.

At 2230 hours, she was transferred back to the LTCF with a sling and a prescription for Acetaminophen with Codeine 30 mg.

Over the next few days, nursing staff noted that the woman was up for most meals but required a mechanical lifting device for transfers which were described as painful.

On the evening of July 1, 2004, the woman was settled in her bed for the night. At 0210 hours the following morning, nursing staff found the woman to be vital signs absent. Death was pronounced and a post mortem examination was not performed.

Eight (8) months later on March 8, 2005, a pathologist speculated that the medical cause of death was possibly an acute coronary event or a pulmonary embolism or a subdural hemorrhage. He went on to state the following:

“I think that a post mortem examination at this time would have a low likelihood of providing sufficient information to be conclusive as to the exact cause of death.”

HISTORY OF THE ALLEGED ASSAILANT (AA)

The AA was a 92 year old gentleman who, prior to May 22, 2002, resided in a retirement home (RH). His medical diagnoses included the following:

1. Frailty (mental) of old age,
2. Remote prostate surgery 10 years ago, and
3. Hypertension.

The only medication regularly taken was Acetyl Salicylic Acid 81 mg. daily.

On May 22, 2002, the day the AA was transferred from the RH to the LTCF, the worker from the Community Care Access Centre (CCAC) completed the "CCAC Client Information A1 Form" upon which was recorded the following:

1. His medical diagnoses,
2. His MMSE score of 20/30 with the following observations:
 - a) He was able to follow a conversation.
 - b) He was observed to be cooperative.
 - c) His judgement and reasoning were noted to be impaired.
 - d) In the previous month, RH staff were concerned that he would wander off and not recall how to return to the RH. As a result, the RH had asked the daughter to acknowledge this risk.
 - e) The daughter had recently taken over her father's bill paying responsibility and had removed his motor vehicle and keys.

On May 22, 2002, the AA was admitted to the LTCF. Additional medical diagnoses documented on admission included the following:

1. Dementia (CT scan done in 1997 demonstrated the presence of cerebral atrophy.),
2. Normal carotid doppler studies in 1997,
3. Hypertension,
4. A remote fractured right hip which was treated with an open reduction and internal fixation,
5. A right inguinal hernia repair, and
6. Benign prostatic hypertrophy which was treated with a transurethral resection (TURP).

On July 17, 2002, his admission medications were listed as follows:

1. Acetyl Salicylic Acid 81 mg. od.,
2. Donepezil Hydrochloride 5 mg. od.,
3. Risperidone 0.6 mg. od.,
4. Ramipril 2.5 mg. od., and
5. Haloperidol.

On this date, the attending physician recorded the following note:

" Now that he has been placed in a nursing home, I think I am going to stop the (Donepezil Hydrochloride) as the point of the (Donepezil Hydrochloride) was to possibly delay admission to the NH. Rather than to

use (Donepezil Hydrochloride) I am going to try him on a little bit of (Citalopram Hydrobromide) to help with some of his depressed symptoms and hopefully he will settle in nicely.”

On August 21, 2002, the LTCF admission case conference was held. In contrast to the assessment conducted by the CCAC, the LTCF health care professionals noted that the AA had been transferred out of the RH because of aggressive behaviour. Initially, LTCF nursing staff questioned if the AA was suffering from a depression but the attending physician believed the AA was “upbeat and positive.”

On September 30, 2002 a LTCF nurse performed a follow up MMSE on the AA and obtained a score of 10/30 which varied significantly from the CCAC measured score of 20/30 recorded 4 months earlier on May 22, 2002.

On October 17, 2002, a LTCF nurse performed the “Cohen Mansfield Inventory of Agitation Assessment” on the AA. In this particular agitation assessment, scores are recorded as follows:

Frequency	1 (never), 5 (once or twice a day), 6 (several times a day), and 7 (several times an hour).
Disruptiveness	1 (never), 3 (moderate), 4 (very much), and 5 (extreme).

On October 17, 2002, the following scores were recorded:

Frequency of 5 or greater were listed as follows:

Day shift – 10,
Evening shift – 11, and
Night shift – 0.

Recorded behaviours included aimless pacing and wandering, inappropriate robing and disrobing, cursing, verbal aggression, constant unwarranted requests for attention or assistance, repetitive sentences or questions, grabbing on to people, general restlessness, attempting to get to another place, handling things inappropriately, and performing repetitive mannerisms.

Disruptiveness of 4 or greater were listed as follows:

Day shift – 7,
Evening shift – 8, and
Night shift – 0.

Approximately one year later in August 2003, the attending physician noted that the AA was becoming more aggressive during the evening. The 1700 hours dosage of Quetiapine Fumarate was increased to 50 mg.

On April 25, 2004, LTCF nursing staff responded to loud voices in the hallway and found the AA grabbing the upper arms of another female resident. Two staff persons escorted him to his room.

On April 26, 2004, LTCF nursing staff noted that the AA displayed aggressive behaviour throughout the day shift as he was grabbing and hitting residents and kicking and hitting staff. On one occasion, he had to be removed from his room mate's bed. Nasal congestion was noted. He was afebrile and had a normal oxygen saturation.

One month later on May 16, 2004, LTCF, nursing staff noted that the AA struck out at staff while he was having a fecally soiled diaper changed. Further incidents of aggressive behaviour were recorded on May 28, May 29, and June 4, 2004.

On the day prior to the incident, LTCF nursing staff noted the following:

“Resident kept coming at me as I distanced my body away from his and held his hand. Resident would not calm down.”

On June 29, 2004, LTCF staff found the AA in a female resident's room rummaging through her drawers. It would appear that the AA was calm at the time and left the room without incident.

Following the death of the woman on July 2, 2004, homicide detectives interviewed LTCF staff members and were advised of the following:

1. There were 6 health care workers (? aides) and 1 nurse on duty the night of the incident.
2. The nurse advised that she received complaints about the AA all the time.
3. The AA had grabbed a female resident by the throat and had put another staff person in a head lock.
4. The nurse on duty that night was pregnant.
5. The LTCF had a retirement section and no locked unit in the nursing home section.

In this particular case, the Committee was able to review the medical records of the AA following the incident of July 29, 2004.

On July 7, 2004, the LTCF attending physician recorded the following note:

“After reviewing pt’s medications, I am not sure if anything should be changed.”

On July 9, 2004, one week after the death, an intake worker from the Regional Geriatric Psychiatry Service noted the following:

“This patient wanders and occasionally gets agitated. But the staff have no problem handling him. Can we prevent another incident like this? Does he need a locked ward?”

On July 13, 2004, a nurse performed a PIECES Assessment.

On July 22, 2004 a typed note containing the findings and conclusions of the Regional Geriatric Psychiatry Assessment was placed in the AA’s LTCF file. The Committee noted the report was finalized after a verbal teleconference with a geriatric psychiatrist. The findings of the Assessment gave a fuller picture of the AA’s management challenges and abnormal behaviours and included the following:

1. He requires assistance with dressing, bathing, and toileting.
2. As long as the person does not confront him or speak loudly to him, then aggression has not been an issue.
3. A loud resident yelling did not bother him but, if he felt he was being yelled at, he could be aggressive.
4. He wandered a great deal of the day mistaking a wheelchair for a hay bailer and a therapist for his wife.
5. When encouraged to sit, he could only stay for a brief time then felt he had to resume his “work”.

The Assessment’s recommended treatment interventions included the following:

1. Discontinue the Olanzapine.
2. Increase the Quetiapine Fumarate in 25 mg. increments every 2 weeks to a maximum dosage of 100 mg. tid., a process that could take 20-24 weeks depending on the starting dose.
3. Increase the Citalopram Hydrobromide from 10 mg. od to 40-60 mg. od.
4. Attempt to do a.m. care at a time when all other residents are not getting up to allow for increased supervision.

5. Commence a trial of Acetaminophen 325 mg. tid.
6. Take daily supervised walks.
7. Obtain a "Sensory Stimulation Kit" from the Alzheimer Society.
8. Consider the use of a "hearing amplifier".
9. Use "velcro bands" across residents' doors as a visual barrier.

On August 11, 2004, the physician's typed progress note acknowledged the AA's aggression when care was being provided and commented that the increased doses of Quetiapine Fumarate had not been effective in managing his aggression. The physician noted that:

"We are still waiting for a report from the psychogeriatric assessment and we, in fact, called (name) today."

Medication changes included the following:

1. Restart Donepezil Hydrochloride 5 mg. od.,
2. Discontinue the Citalopram Hydrobromide,
3. Start Trazodone Hydrochloride 50 mg. after supper as most of his aggressive outbursts were in the evening.

On August 18, 2004, a family case conference was held following which the attending physician recorded the following note:

"Mr. (name's) condition appears to be getting worse if anything. We have come to the conclusion that Mr. (name) will have to be transferred to a locked ward."

On December 1, 2004, the attending physician recorded the following note:

"Mr. (name) has had a difficult year with more agitation and aggression."

He also recounted that in August, he had contacted the CCAC to arrange for the AA to be transferred to a locked unit as he wandered and caused problems with other residents. It was noted that he had pushed another resident causing an injury.

On August 20, 2004, the AA was admitted to the Regional Mental Health Centre. When he developed a bronchopneumonia, he was admitted to a general hospital for management.

On September 8, 2004, he was discharged back to the LTCF in much the same condition as when he left, albeit he was now noted to be significantly weakened.

On readmission to the LTCF, nursing staff noted that the AA was unable to ambulate which resulted in him being kept in a chair for safety reasons. The geriatrician reassessed the AA and detailed the transition to his present clinical state. He recommended that the Risperidone 0.5 mg. bid. be increased to 3 mg. od.

In December 2004, LTCF nursing staff noted that the AA was up and ambulating again. Although nursing staff ambulated the AA 2-3 times daily, most of his time was spent in a chair for safety reasons. Nursing staff recorded that the AA was extremely disruptive and constantly shouting. The attending physician recorded the following note:

“I strongly feel this gentleman should not be here. He should either be in a locked ward with specialized care or be sent down to (city) for potential rehabilitation. There are no safety concerns now as he is confined to a chair. However, this is clearly not the optimum care for him. I have talked to his daughter am going to talk to the nurse from the Geriatric Assessment Team again for reassessment and I will also have them attempt to determine where he stands on the waiting list for a locked unit.”

DISCUSSION

This is the case of an 89 year old woman who died on July 2, 2004, after been assaulted by a 92 year old year old male resident of a LTCF on June 29, 2004. Documentation relating to the deceased woman as well as the AA were submitted as part of the report. In the Committee's opinion, medical records of an AA, wherein an elderly LTCF resident has died, should always be included in the documentation submitted for review to allow for a meaningful assessment of the psychogeriatric dynamics leading up to the assault and subsequent death.

In this particular case, the woman appeared to be an exemplary LTCF resident with primarily physical reasons for requiring long term care placement. In the Committee's opinion, her cognitive difficulties were never a major management issue. Not one LTCF staff person described her behaviour as irritating, provoking, or problematic. Given the above, the Committee believed that her role in provoking the assault was inconsequential.

On the other hand, the Committee noted that LTCF staff consistently reported that the management of the AA was problematic due to his major cognitive impairment which resulted in unpredictable and severe aggressive behaviours. LTCF progress notes suggested that the AA's aggressive behaviour was never

really controlled by any of the prescribed pharmacologic agents albeit that the dosages of these medications were never really maximized.

Given the circumstances surrounding the death of this woman, the Committee wanted to comment on the following 4 areas:

1. Medication issues,
2. Assessment issues,
3. Integration of services issues, and
4. LTCF physical layout and care issues.

1. Medication Issues

When the AA was admitted to the LTCF, the attending physician decided to discontinue his Donepezil Hydrochloride based on the belief that the only reason the AA was on this cholinesterase inhibitor was to delay his admission to the LTCF. In the Committee's opinion, this clinical decision was inconsistent with usual accepted practice, underestimated the potential benefits of this class of medication, and failed to appreciate the potential difficulties that may develop when cholinesterase inhibitors are withdrawn.

The attending physician noted that he followed most of the suggestions of the Regional Geriatric Psychiatry Assessment Team. In fact, the decision to discontinue the Citalopram Hydrobromide was not endorsed by the Regional Geriatric Psychiatry Assessment Team which recommended an increase in dosage to 40-60 mg./day. Similarly, the dosage of Quetiapine Fumarate was kept in the low range of 25-50 mg./day while the Regional Geriatric Psychiatry Assessment Team recommended a dosage increase to 100 mg. tid.

2. Assessment Issues

On October 17, 2002, a LTCF nurse performed the "Cohen Mansfield Inventory of Agitation Assessment" on the AA. In the Committee's opinion, this assessment gave an excellent overview of the AA's aggressivity and abnormal behaviours. Following this assessment, ongoing structured assessments of the AA's abnormal behaviours (number, frequency, severity, and intensity) were not performed and/or documented. In the Committee's opinion, this then relegated all negotiations regarding the AA's management to the basis of narrative assessments which, by their very nature, are subject to individual and diverse interpretation.

From the documentation submitted for review, the Committee believed that LTCF staff accepted the AA's aggressive behaviours until after the assault on June 29, 2004. On July 7, 2004, the attending physician recorded the following note:

“His behaviour is relatively stable. He does wander and occasionally gets agitated however if he is approached in the right fashion he can be easily calmed”.

The attending physician went on to speculate that the AA would benefit from placement in a locked unit, however, the seriousness of the incident resulting in the woman's death did not appear to be appreciated. In the Committee's opinion, the health care professional's acceptance of the AA's aggressive behaviours was dangerous in that it failed to recognize the history of past behaviours as a predictor of the future.

On July 22, 2004, just one month after the incident, the report of the Regional Geriatric Psychiatry Assessment Team was submitted. Of concern to the Committee was the fact that the report included recommended treatment interventions by the consultant regional psychogeriatrician who had never formally assessed the AA.

3. Integration of Services Issues

It has been the Committee's experience that most psychiatry services including Regional Geriatric Psychiatry Services offer both consultative support and suggested recommendations to assist in the management of elderly LTCF residents with abnormal behaviours. While there is a need for such counsel, the Committee strongly believes that there is a need to clearly and quickly identify residents who, by the very nature of their aggressive behaviour, would be unsuitable to remain in the LTCF. In the Committee's opinion, the AA met the criteria for involuntary admission to a psychiatric facility as his aggressive behaviour was a risk to himself, staff, and other residents of the LTCF. From the documentation submitted for review, the Committee could not determine if consideration was given to an involuntary admission to a psychiatric facility.

On October 17, 2002, a LTCF nurse performed the “Cohen Mansfield Inventory of Agitation Assessment” on the AA. The results of this assessment clearly identified the AA's abnormal behaviours. Of concern to the Committee was that this formal assessment was never repeated throughout the rest of his stay in the LTCF. The Committee wondered if regular, repeated assessments might have resulted in the LTCF health care professionals recognizing the potential seriousness of the AA's aggressive behaviour which may have resulted in an earlier admission to a psychiatric facility, rather than just consultation and advice.

In this particular case, the Regional Geriatric Psychiatric Assessment Team's advice was not completely followed which may, in part, explain why the AA's aggressive behaviours were never really adequately controlled. In addition, the regional geriatric psychiatrist offered verbal treatment advice without ever formally assessing the AA. The Committee wondered if a formal psychogeriatric medical assessment would have resulted in a different course of treatment.

When the AA was finally admitted to the Regional Mental Health Centre on August 20, 2004, he developed an acute aspiration pneumonia which resulted in him being admitted to an acute care general hospital which appeared to deflect the responsibility for his ongoing supervision away from the psychiatric service.

In time, the AA was transferred back to the LTCF without the benefit of ongoing support from the geriatric psychiatry service. In the Committee's opinion, elderly LTCF residents with abnormal behaviours who require involuntary admission to a psychiatric facility should be followed with post-discharge consultation and community support in the LTCF.

4. LTCF Physical Layout and Care Issues

The circumstances surrounding the incident involving these 2 LTCF residents highlights a key issue in long term care in present day Ontario. In the Committee's experience, care provided in the long term care setting needs to be tailored to the care requirements of each individual resident. There can be no doubt that the intermingling of behaviourally disruptive residents with others will result in confrontations which may result in injury and, in some cases, death.

In this particular case, the woman's long term care placement was primarily because of her physical care needs and, as such, she was unable to avoid the aggressive behaviour of the AA. In the Committee's opinion, such a mix of care needs was suboptimal for both residents.

The Committee strongly believes that behaviourally problematic elderly individuals should not be cared for in a LTCF unless the LTCF can provide the following:

1. A secure locked unit that allows for a smaller grouping of elderly residents with aggressive behaviours,
2. Adequate and increased staff to resident ratios,
3. Staff who are highly trained in the management of elderly residents with aggressive behaviours,
4. Ongoing, systematized behavioural evaluation procedures,

5. Consistent linkages with specialized psychogeriatric services empowered to move behaviourally problematic residents to a more appropriate care facility when required,
6. The need to ensure that, if a behaviourally problematic individual is readmitted to a LTCF, provision is made for readily available consultative support with therapeutic interventions including transfer out of the LTCF to a more appropriate care facility.

RECOMMENDATIONS

1. The Office of the Chief Coroner should give consideration to publishing the circumstances surrounding this death in the Sixteenth Annual Report of the Geriatric/Long Term Care Review Committee to the Chief Coroner for the Province of Ontario.
2. Health care professionals working in licensed long term care facilities should be reminded of the reporting requirements of Section 10 of the Coroners Act of Ontario.
3. The Office of the Chief Coroner should remind coroners that all homicides of residents of licensed long term care facilities will be reviewed by the Geriatric/Long Term Care Review Committee. The importance of ensuring that a full police investigation, including the obtaining of the alleged assailant's medical records, should be mandatory to allow for a meaningful comprehensive review by the Committee.
4. Community Care Access Centre health care professionals should be reminded of the importance of accurately identifying the care needs of elderly clients with abnormal, aggressive behaviours.
5. Health care professionals should be reminded that behaviourally problematic elderly individuals should not be cared for in a licensed long term care facility unless the facility can provide the following:
 - a) A secure locked unit that allows for a smaller grouping of elderly residents with aggressive behaviours,
 - b) Adequate and increased staff to resident ratios,
 - c) Staff who are likely trained in the management of elderly residents with aggressive behaviours,
 - d) Ongoing, systematized behavioural evaluation procedures,
 - e) Consistent linkages with specialized psychogeriatric services empowered to move behaviourally problematic residents to a more appropriate care facility when required,
 - f) The need to ensure that, if a behaviourally problematic individual is

readmitted to a LTCF, provision is made for readily available consultative support with therapeutic interventions including transfer out of the LTCF to a more appropriate care facility.

6. Health care professionals working in licensed long term care facilities should be reminded of the importance of utilizing a recognized agitation/aggression risk assessment tool such as the “Cohen Mansfield Inventory of Aggression” for elderly licensed long term care facility residents with abnormal behaviours. Implicit in this recommendation is the need to identify a behavioural level that will automatically trigger transfer from the licensed long term care facility to a psychiatric facility for assessment.
7. Health care professionals working in Regional Geriatric Psychiatry Assessment Services should be reminded of the importance of the following:
 - a) Removing elderly aggressive residents from a licensed long term care facility for a comprehensive formal medical/behavioural assessment,
 - b) Providing ongoing clinical support for admitted patients who develop an acute medical illness and are then transferred back to a long term care facility, and
 - c) Ensuring that the regional psychogeriatrician formally and directly assessed elderly long term care facility residents with aggressive behaviours.

CASE #7

ISSUES

1. Medical/Nursing Management
2. Admission/Discharge/Transfer Procedures

HISTORY

This is the case of an 84 year old gentleman with a past history of gastric cancer which was surgically treated with a subtotal gastrectomy in October 2003. About 1 year later in the fall of 2004, he was investigated for abdominal pain, anorexia, weight loss, and dyspnea. Apparently, the cause for his deterioration was not identified. In March 2005, he had a cardiac assessment of his worsening cardiac failure which resulted in his cardiac medications being modified. Previous cardiac investigations had demonstrated the presence of coronary artery atherosclerosis with left main stem disease and mitral regurgitation for which surgical intervention had been declined.

On May 4, 2005, the gentleman was admitted to the regional health centre (RHC) for investigation of dyspnea on minimal exertion, anorexia, and weight loss. Investigations revealed the presence of anemia, azotemia, hyperglycemia, elevated liver enzymes, an abnormal EKG with no evidence of acute ischemia, and CT/MRI evidence of the presence of 4.5 cm mass in the region of the head of the pancreas/duodenum. The surgeon felt that the mass was most likely a recurrence of his gastric adenocarcinoma.

During this hospitalization, the gentleman's clinical condition gradually deteriorated. Following consultation with the patient and his family, the decision was made to provide palliative care and transfer him to the community general hospital (CGH) in his home community where he could be close to his family.

The gentleman's hypertension and angina were controlled with Metoprolol Tartrate. When he developed hypotension on May 10, 2005, this medication was discontinued.

In the days prior to the transfer, the gentleman's oral intake was not very good but he did eat some of his meals. When he developed urinary retention, an indwelling foley catheter was inserted.

On May 11, 2005, the gentleman was seen by the palliative care nurse who confirmed his wish to be transferred back to the CGH where he could be closer to his family. The absence of significant symptoms was noted and that his pain appeared to be controlled with Acetaminophen with Codeine 30 mg. Later that day it was noted that he had compromised renal function as evidenced by a creatinine of 164 and a creatinine clearance estimated to be 30 cc./minute. He was receiving Ciprofloxacin Hydrochloride for a suspected urinary tract infection. A further discussion resulted in the gentleman agreeing to have a "DNR" order written.

The gentleman's non insulin dependent diabetes mellitus (NIDDM) was managed with diet and 2 daily oral hypoglycemic agents – Metformin Hydrochloride 500 mg. and Glyburide 10 mg. The Committee noted that, prior to this hospitalization, his fasting blood sugars and hemoglobin A1Cs tended to be elevated which suggested that blood sugar management was problematic. It was noted that all of his recorded glucometer readings prior to May 13, 2005 were either normal or slightly elevated.

At 0800 hours on the morning of May 13, 2005, the day of the transfer, nursing staff noted that the gentleman was "weak". The diagnosis of hypoglycemia (blood sugar 1.7) was made. His planned transfer to the CGH scheduled for later that day was noted. Intravenous Dextrose was administered with a good response noted. At 1040 hours, the gentleman was noted to be more dyspneic which was thought to be due to probable congestive heart failure. Consideration was given to the administration of Furosemide. At some point he was assessed by the attending physician who ordered the oral hypoglycemic medications to be held. It would appear that this order was written after the oral hypoglycemic agents had been given that morning.

Further episodes of hypoglycemia were noted at 1550 hours (blood sugar – 3.1) and 1604 hours (blood sugar – 2.5). At 1610 hours, an ampoule of 50% Dextrose was administered. At 1615 hours, his blood sugar was recorded at 5.7. The decision was made to proceed with the land transfer as the patient appeared to be "stable". Juice was given to be taken in the land transfer vehicle in the event of further hypoglycemic episode. Instructions were given to have a blood sugar measurement upon his arrival at the CGH.

According to the Transport Log Sheet, the attendants arrived on the nursing unit at 1635 hours but did not depart until 1700 hours. The Committee suspected that the delay in departure was to allow for the 50% Dextrose given at 1645 hours to have an effect. The transfer vehicle arrived at the emergency department of the CGH at 1818 hours. At approximately 1800 hours, 75 minutes

after the administering of the 50% Dextrose and 18 minutes away from the receiving CGH, the gentleman suddenly developed coldness, clamminess, and diaphoresis, symptoms and signs consistent with a further bout of hypoglycemia. It would appear that no attempt was made to administer juice or provide oral intake while the gentleman was in the transfer vehicle. The Transport Log Sheet contained no documentation of the hypoglycemic event.

The CGH's emergency room note stated that the patient was "alert and talkative when picked up, became less responsive – 10-15 minutes prior to arrival at 1830". Nursing staff noted that the gentleman was mottled and jaundiced with decreased responsiveness. His blood sugar was recorded at less than 1.1. Shortly after arrival, the patient suffered a cardiopulmonary arrest which did not respond to CPR.

On May 14, 2005, a late entry note was recorded on the gentleman's RHC medical record which described the hypoglycemic episode of May 13, 2005 including the giving of a snack and the ampoule of 50% Dextrose. It was noted that the patient stated the he was "OK". When the post incident blood sugar was reported to be 9.1, the decision was made to proceed with the transfer with an accompanying snack.

The death was reported to a local coroner who commenced an investigation including the ordering of a post mortem examination. The pathological findings were as follows:

1. Adenocarcinoma involving the head of the pancreas of either primary pancreatic or metastatic gastric origin,
2. Atherosclerotic coronary artery disease with
 - a) Focal severe atherosclerosis of the left anterior descending and left circumflex arteries,
 - b) Focal severe subendocardial and interstitial fibrosis of the interventricular septum consistent with remote myocardial ischemia,
 - c) Biventricular and biatrial dilatation of the heart, and
 - d) Moderate pulmonary edema and interstitial fibrosis,
3. Pulmonary anthracosilicosis with chronic pulmonary inflammation,
4. Bilateral, small serosanguinous pleural effusions, and
5. Mild, renal arteriolar nephrosclerosis.

The coroner attributed the cause of death to severe hypoglycemia complicating drug therapy for non-insulin dependent diabetes mellitus (NIDDM). Contributing factors included coronary artery disease and adenocarcinoma of the pancreas (primary or secondary).

DISCUSSION

This is the case of an 84 year old gentleman who was admitted to the RHC for investigation of dyspnea on minimal exertion, anorexia, and weight loss. His past medical history was extensive and included the following:

1. A subtotal gastrectomy in October 2003 for a gastric cancer,
2. Atherosclerotic heart disease,
3. Hypertension, and
4. Non-insulin dependent diabetes mellitus.

Investigation revealed the presence of a mass in the head of the pancreas which was felt to be a recurrence of his gastric carcinoma. Following consultation with the gentleman and his family, the decision was made to provide palliative care and transfer him back to the CGH in his home community where he could be close to his family. The Committee agreed with this proposed course of action.

Management of the gentleman's NIDDM included diet control and oral hypoglycemics. Prior to this admission, his blood sugars had been elevated suggesting that the control of his NIDDM was problematic. In the Committee's opinion, this should not have been unexpected given his deteriorating medical status.

On the morning of the transfer to the CGH, the gentleman developed weakness. The finding of a blood sugar of 1.7 resulted in the diagnosis of hypoglycemia being made which was managed with Intravenous Dextrose. The attending physician ordered the gentleman's oral hypoglycemic medications to be held. The medical progress note stated that the oral hypoglycemic agents "have been held" and that "hopefully this will not be an issue", a comment the Committee believed was in reference to the transfer scheduled for later that day. It would appear that this order was written after the oral hypoglycemic agents had been given that morning. From the documentation submitted for review, the Committee could not determine if any of the health care professionals realized the significance of these events. Further episodes of hypoglycemia occurred later that afternoon just prior to the transfer which responded to Intravenous Dextrose. The decision was made to proceed with the transfer in a land transfer vehicle manned with non medical trained personnel. It would appear that nursing staff provided "juice" and possibly a "snack" to be given during the transfer in the event of a further bout of hypoglycemia. The land transfer vehicle left the RHC at 1700 hours and arrived at the CGH at 1818 hours. 18 minutes south of the CGH, the gentleman suffered a further bout of hypoglycemia. On arrival at the emergency room of the CGH, his blood sugar was recorded at less than 1.1.

Shortly after arrival, the gentleman had a cardiopulmonary arrest from which he could not be resuscitated.

While the gentleman had a number of advanced, severe medical conditions for which he had quite appropriately been deemed to require palliative care, the Committee believed that the development of severe hypoglycemia played a significant role in his final demise. In the Committee's opinion, the pathophysiology of the hypoglycemia most likely related to his decreasing hepatic and renal function (as evidenced by the presence of jaundice with elevated liver function tests and decreased creatinine clearance). The clinical effects of the hypoglycemic medications, especially the Glyburide, would have been potentiated in the presence of impaired hepatic metabolism and renal function. In the Committee's experience, the development of profound, recurrent, and prolonged hypoglycemia should not have been unexpected despite the administration of oral and intravenous glucose to raise his blood sugar. Another factor that may have contributed to the development of hypoglycemia was the fact that his oral intake was limited over the last illness and especially the last few days.

The Committee wondered if the oral hypoglycemic agent Metformin Hydrochloride may have contributed to the development of unrecognized problems in the presence of hepatic compromise. For example, this medication is known to contribute to the development of lactic acidosis, a condition that was not commented on during the hospitalization in the RHC. While there did not appear to be laboratory evidence to support the presence of persisting lactic acidosis, his serum bicarbonate was low on the morning of the transfer but returned to normal later that day. This suggested to the Committee that true lactic acidosis was not present. However, the presence of compromised hepatic function would impair a patient's ability to respond to hypoglycemia because of the impaired intrinsic release of store glycogen and glucose. Given the above, the Committee believed this was why the gentleman's hypoglycemia was so severe, profound, and persistent. Similarly, the symptom of dyspnea may have been due to tachypnea which is well known to occur with lactic acidosis.

There can be no doubt that this gentleman was suffering from a terminal illness from which he was not going to recover. The Committee agreed with his designation of "palliative" as he was going to die in the very near future. Given the terminal nature of his disease process, the fact that his care had been designated as "palliative, and the fact that he had an agreed to "DNR" order, the Committee was of the opinion that transfer in a land vehicle staffed by non-paramedics was not inappropriate. In general, the use of land ambulances staffed with paramedics is reserved for patients with life threatening illnesses for whom both the prognosis for life saving interventions are substantial and there is the absence of a DNR order.

In this particular case, it was unfortunate that the gentleman developed hypoglycemia while in transit and, for reasons unknown, administration of oral glucose did not occur. Even if oral glucose had been given, it was the Committee's view that further bouts of hypoglycemia may have occurred as part of the inevitable downward spiral of his terminal illness and that the death would have been postponed for only a short period of time. Had the transfer been done in a paramedic staffed ambulance, the Committee believed that the hypoglycemia would have been recognized and appropriate intervention would have occurred.

Given the fact that the gentleman developed severe hypoglycemia on the proposed day of transfer, the Committee wondered if the health care professionals at the RHC considered postponing the transfer for a day or two to allow for stabilization of his blood sugar. The Committee suspected that the discontinuation of the oral hypoglycemic would have resulted in the normalization of his blood sugar which may have allowed for a successful transfer at that time.

The Committee is aware of the fact that non-paramedic staffed land transfer services are being increasingly utilized in the Province of Ontario to transfer patients with potentially unstable clinical conditions. For example, transfer of patients with terminal diseases are quite common. In these instances it is important to ensure that the patient and/or family members are fully aware of the seriousness of the terminal illness and that complications may occur at any moment.

Similarly, health care professionals at the receiving institution should be advised of the patient's clinical condition and impending transfer and should agree to accept the patient prior to the transfer. In this particular case, communication from the sending to the receiving health care institution may not have taken place.

And finally, the Committee believes that the method of land transportation chosen should match the patient's clinical status. In general, the use of a non-paramedic staffed land transfer vehicle is inappropriate for transfers of patients with unstable clinical conditions.

RECOMMENDATIONS

1. The Office of the Chief Coroner should give consideration to publishing the circumstances surrounding this death in the Sixteenth Annual Report of the Geriatric/Long Term Care Review Committee to the Chief Coroner for the Province of Ontario.

2. Health care professionals should be reminded of the importance of choosing an appropriate transport vehicle when transferring a patient between facilities. The type of transport vehicle selected should match the patient's clinical needs.

For example, the transport of a patient who may potentially become unstable during the transfer should be done in a paramedic equipped vehicle such as an ambulance. Transportation in a non-paramedic equipped land transport vehicle should only occur if the attendants are trained and equipped to manage the patient's clinical needs. Should an appropriate vehicle not be available to transport the patient, consideration should be given to delaying the transfer until the patient's clinical condition has been stabilized or an appropriate transfer vehicle becomes available.

3. Health care professionals should be reminded of the importance of watching for the development of side effects of medications prescribed to elderly patients with impaired hepatic or renal function.

For example, elderly diabetic patients with impaired hepatic and/or renal function who are receiving oral hypoglycemic agents including the biguanides and/or sulfonylureas should be closely monitored for the development of hypoglycemia.

4. Health care professionals should be reminded of the importance of good communication with patients and their family members when a patient has been designated as requiring palliative care. Implicit in this recommendation is the need to ensure that the patient and family members are aware of the progressive nature of the terminal illness and that sudden and unexpected complications including death may occur at any time.

5. Although the physician has the final say in the discharge process and writes the discharge order, it is the Committee's view that the discharge of elderly patients from hospital (acute or chronic) should be as a general consensus of the health care team (physician, nurse, homecare, patient, family, discharge planner, etc.). Implicit in the discharge process is the need for good documentation and communication of concerns amongst all members of the health care team. Where concerns about the discharge have arisen and not been satisfactorily resolved, the holding of a case conference including all members of the health care team should occur in order to address the concerns.

There are many factors that should be considered when making the discharge decision (vital signs, level of function, clinical status of the patient, home supports, etc.). Rarely is it appropriate to discharge an unstable patient from hospital to another setting unless the receiving institution is informed of the patient's clinical condition, is capable of providing adequate care for the patient, and agrees to accept the patient.

THE DISCHARGE DECISION AND PROCESS SHOULD ALWAYS BE IN THE INTEREST OF ENSURING PATIENT SAFETY AND THAT THE CLINICAL NEEDS OF THE PATIENT WILL BE MET. THE DISCHARGE DECISION AND PROCESS SHOULD NEVER BE BASED ON THE NEEDS OF THE HOSPITAL!

RECOMMENDATION ANALYSIS 2001 - 2005

For the Sixteenth Annual Report, the Committee prepared an analysis of the types of recommendations generated over the last five years.

TYPES OF RECOMMENDATIONS 2000 – 2004

	2001	2002	2003	2004	2005
TOTAL # OF CASES	30	21	17	25	28
MEDICAL/NURSING MANAGEMENT	17(44)	13(28)	7(16)	14(26)	12(24))
COMMUNICATION/ DOCUMENTATION	10(14)	8(12)	9(10)	9(16)	7(9)
USE OF DRUGS IN THE ELDERLY	11(16)	6(17)	4(8)	7(10)	5(8)
ADMISSION/DISCHARGE/ TRANSFER PROCEDURES	6(9)	6(10)	4(8)	3(3)	3(4)
DETERMINATION OF CAPACITY AND CONSENT FOR TREATMENT/ DNR	5(7)	2(2)	3(4)	2(2)	2(3)
THE MINISTRY OF HEALTH AND LONG-TERM CARE	7(10)	0	2(4)	6(10)	1(1)
THE ACUTE AND LONG TERM CARE INDUSTRY	0	0	0	6(12)	6(9)
THE OFFICE OF THE CHIEF CORONER	8(8)	4(4)	8(8)	10(10)	7(9)

A number followed by a bracketed number (i.e. –12(24) indicates that there were 12 cases with a total of 24 recommendations made relevant to the topic area.

As was the case over the previous years, the Committee noted that the “Medical/Nursing Management” section was the number one topic area for recommendations generated over the last five years. This was followed by the topic areas of “Communication and Documentation” and “The Use of Drugs in the Elderly”.

Although the recommendations included in Case Review #1 were not specifically included in the General Recommendations Section of this Annual Report as this specific care review was completed in 2002, the Committee noted that two of the recommendations were directed towards the Ministry of Health and Long-Term Care. As evidenced by Case Reviews #1, #4, and #6, the Committee is concerned that the management of elderly patients with abnormal behaviours is an increasing challenge facing health care professionals, institutions, and the Ministry.

SUMMARY

The Committee is thankful for continuing to have the privilege of serving the Office of the Chief Coroner and the citizens of Ontario over the past year. We trust that these recommendations will be of value in ensuring that elderly residents of acute care and long term care institutions and “care” homes in Ontario receive the best possible care in the future.

ACKNOWLEDGEMENT

The Committee would like to acknowledge the efforts of Ms. Carolyn McLellan and Mrs. Cathy Traynor for their dedicated and invaluable service in the preparation of the individual reports and the Sixteenth Annual Report.

