

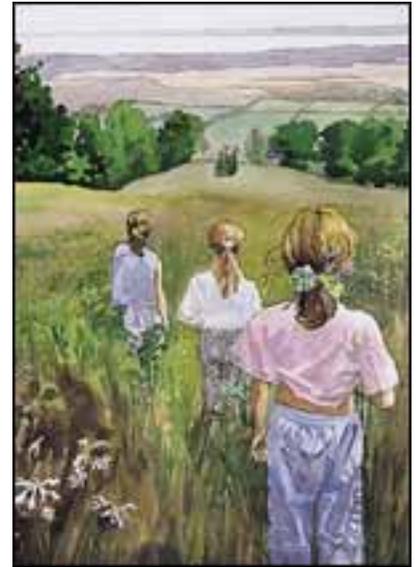
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Our best asset

Gordon Brock, MD, CCFP

CJRM 2000;5(2):57

I'm of the old school — I've always told physicians to treat every other physician as a brother or sister. Recently this was literally true for me when my youngest brother, an urban emergency department physician, came up to Temiscaming to lend us a hand.

His comments after two weeks here are instructive and bear repeating. There is no doubt in my mind that the same comments would apply if it had been your hospital he had visited.

1. We are, he said, extremely well-organized for emergency cases. We have a clear line of transfer to our nearest large hospital for trauma victims. Our agreement with this hospital is that they will always take our multiple trauma patients IMMEDIATELY, with minimal phone consultation, waits and other delays that are not uncommon in small urban hospitals.
2. Our small crash room is well laid out and extremely well equipped for our size. We have clear, user-friendly protocols for things such as streptokinase use — protocols that stress the importance of making decisions quickly and that guide less experienced nurses and physicians through the technical aspects.
3. We attach great importance to continuing medical education. We require all physicians on staff to complete the 50 hours of CME required by the College of Family Physicians of Canada, even if they are not full members. We encourage them to use the 20 days we are allotted in our contract for CME and we willingly cover each others' patients and ED shifts when one of us is away.
4. We support each other (nobody else does). We know that if we have a seriously ill patient, difficult situation or overcrowded ED we can call any of our colleagues to help, whether it's 1 pm or 1 am. If we have a family problem or illness, we are granted immediate leave to settle it. We take pains to see that everyone gets a good vacation annually and, whenever possible, at the time of their choosing.
5. We make great efforts to bond our medical staff. We require all physicians to attend inpatient rounds every morning at 8:45. Discharges are done before 10 am "or else." We

discuss all in-patients and difficult patients seen overnight; everyone is encouraged to make suggestions and talk openly. We support the physician when he or she is wrong.

I have attended the SRPC's Annual Rural and Remote Area Medicine Course every year since 1993. I am truly impressed with the quality of the attendees. As my practice partner, Dr. Vydas Gurekas, said once: "Everyone there would be a star elsewhere." Corporations and governments unveil statements such as "Our people are our best asset." I find that this statement is often an empty slogan and that the "little people" often get shafted. We in rural medicine must strive to ensure that "our people are our best asset" does not become meaningless propaganda. Our people truly are our greatest asset.

Correspondence to: Dr. Gordon Brock, Centre de Santé Temiscaming, CP 760, Temiscaming QC J0Z 3R0; geebee@neilnet.com

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Notre meilleur atout

Gordon Brock, MD, CCFP

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Je suis de la vieille école — j'ai toujours dit aux médecins de traiter tous leurs collègues comme un frère ou une sœur. Récemment, ce fut vraiment le cas pour moi lorsque mon jeune frère, médecin dans un service d'urgence urbain, est venu nous prêter main-forte au Témiscamingue.

Ses commentaires après un séjour de deux semaines sont instructifs et méritent d'être répétés. Il aurait certainement fait les mêmes observations s'il avait visité votre hôpital.

1. Selon lui, nous sommes extrêmement bien organisés pour les cas d'urgence. Nous avons une voie claire de transfert des traumatisés au gros hôpital le plus proche. Notre entente avec cet hôpital prévoit qu'il accueillera toujours IMMÉDIATEMENT nos patients polytraumatisés avec un minimum de consultation téléphonique, d'attente et d'autres retards qui sont monnaie courante dans les petits hôpitaux urbains.
2. Notre petite salle d'urgence est bien aménagée et extrêmement bien équipée pour notre taille. Nous avons des protocoles clairs et très conviviaux sur des questions comme l'utilisation de la streptokinase — des protocoles qui mettent l'accent sur l'importance de décider rapidement et qui guident les infirmières et les médecins moins chevronnés en ce qui concerne tous les aspects techniques.
3. Nous attachons beaucoup d'importance à l'EMC des médecins. Nous exigeons que tous les médecins membres du personnel fassent les 50 heures d'EMC requises par le Collège des médecins de famille du Canada, même s'ils ne sont pas membres à part entière. Nous les encourageons à utiliser les 20 jours que nous avons prévus dans notre contrat pour l'EMC et lorsqu'un d'entre nous s'absente, les autres le remplacent volontiers auprès de ses patients et pendant ses périodes prévues de présence à l'urgence.
4. Nous nous entraïdons (personne d'autre ne nous aide). Nous savons que face à un patient gravement malade, une situation difficile ou un service d'urgence surchargé, nous pouvons demander l'aide de n'importe lequel de nos collègues, qu'il soit 13 h ou 1 h du matin. Si nous avons un problème ou une maladie dans la famille, on nous accorde immédiatement congé pour le régler. Nous faisons des efforts spéciaux pour nous assurer que tous ont de

bonnes vacances annuelles et, chaque fois que c'est possible, puissent les prennent aux dates qui leur conviennent le mieux.

5. Nous faisons d'importants efforts pour resserrer les liens entre les membres de notre personnel médical. Nous exigeons que tous les mé-decins visitent leurs patients le matin à 8 h 45 et signent les congés avant 10 h (cette règle est strictement appliquée). Nous discutons de tous les patients hospitalisés et des cas difficiles examinés pendant la nuit. Nous encourageons tout le monde à faire des suggestions et à parler ouvertement. Nous nous efforçons de corriger positivement les erreurs.

Chaque année depuis 1993, j'assiste au cours annuel de médecine en région rurale et éloignée de la SMRC. La qualité des participants m'impressionne vraiment. Comme l'a déjà dit mon associé, le Dr Vydas Gurekas, «Tout le monde ici serait une étoile ailleurs». Les entreprises et les gouvernements affirment que «nos ressources humaines constituent notre meilleur actif». Je constate qu'il s'agit souvent de belles paroles vides et que ce sont «les petits» qui paient souvent. Les médecins ruraux doivent s'efforcer de faire en sorte que des affirmations comme «nos ressources humaines sont notre meilleur actif» ne deviennent pas une propagande qui sonne creux. Nos ressources humaines sont vraiment notre actif le plus important.

Correspondance : Dr Gordon Brock, Centre de Santé Témiscamingue, CP 760, Témiscamingue QC J0Z 3R0; geebee@neilnet.com

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President's message: Ongoing challenges and passing the torch

Patricia Vann, MD

CJRM 2000;5(2):59

This February the Society of Rural Physicians of Canada (SRPC) and the Canadian Medical Association released statistics that showed rural Canada is short some 1600 physicians. The number of rural doctors decreased 15% between 1994 and 1998. Our already vulnerable communities, isolated from secondary and tertiary centres by the challenges of climate and geography, are now cared for, per capita, by fewer than a third of the number of general practitioners that practise in urban communities. How much longer can those working in the field continue to provide the services needed in these areas? What hope is there for the future of rural medicine?

Members of the SRPC (rural doctors like yourself) have worked hard in the past 8 years for equitable health care for rural Canadians and sustainable working conditions for rural physicians. It is starting to pay off. Compensation for call is now the norm. Training programs are beginning to change so that physicians will graduate with the necessary clinical competence and skills to practise in rural areas. Students are considering rural medicine as a rewarding career choice. Partnerships have been formed with many organizations concerned with improving rural health care delivery. The SRPC partnered with HealthSat and through a satellite Canadian Medical Forum Editorial Board is developing relevant CME programs to be broadcast directly to your home or office. These programs will help make it easier for us to keep in touch and to keep up to date.

The Office of Rural Health (ORH) at Health Canada continues to focus attention on rural health issues at the federal level. In April 2000 the ORH will launch the \$11-million Rural and Remote Health Innovations and Initiative. This is one of several initiatives supported by a \$50-million fund announced in the February 1999 budget, for Innovations in Rural and Community Health. These initiatives will provide us with the opportunity to seek funding to implement several of the projects that we have been promoting as so important to the future of rural health care.

Proposed projects will include the following: defining the scope of practice; working toward a

national rural locum licence; defining emergency-relevant triage protocols; and developing advanced skills for rural physicians on an ongoing basis.

I urge each of you to come forward now, join the SRPC and help with these new initiatives. It is only together that we can hope to turn things around and make things happen. The two messages that I have delivered over and over again as your president for the last 2 years is that rural health care is unique and that the providers in rural and remote Canada are very special people. I have been proud to represent you for the last few years and look forward to working with the incoming executive as we continue to move forward.

Correspondence to: Dr. Patricia Vann, c/o SRPC, Box 893, Shawville QC J0X 2Y0

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Message de la présidente : Les défis continuent pour la relève

Patricia Vann, MD

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En février, la Société de la médecine rurale du Canada (SMRC) et l'Association médicale canadienne ont dévoilé des statistiques montrant qu'il manque quelque 1600 médecins dans les régions rurales du Canada. Le nombre des médecins ruraux a diminué de 15 % entre 1994 et 1998. Nos communautés déjà vulnérables, isolées des centres de soins secondaires et tertiaires par les défis que posent les conditions climatiques et la géographie, comptent maintenant, par habitant, moins de trois fois moins d'omnipraticiens que les milieux urbains. Pendant combien de temps encore ceux qui œuvrent sur le terrain pourront-ils continuer de fournir les services nécessaires dans ces régions? Y a-t-il de l'espoir en ce qui concerne l'avenir de la médecine rurale?

Les membres de la SMRC (des médecins ruraux comme vous) n'ont pas ménagé leurs efforts depuis huit ans afin d'obtenir des soins de santé équitables pour les Canadiens ruraux et des conditions de travail viables pour les médecins ruraux. Leurs efforts commencent à porter fruit. La rémunération des périodes de garde est maintenant courante. Les programmes de formation commencent à changer : les médecins obtiendront donc leur diplôme après avoir acquis les compétences cliniques et les connaissances spécialisées dont ils ont besoin pour pratiquer en milieu rural. Les étudiants considèrent la médecine en milieu rural comme un choix de carrière enrichissant. On a créé des partenariats avec de nombreuses organisations intéressées à améliorer la prestation des soins de santé en milieu rural. La SMRC a établi un partenariat avec SatSanté et, par l'entremise d'un conseil de rédaction satellite du Forum médical canadien, élabore présentement des programmes d'EMC pertinents qui seront diffusés directement chez vous, à la maison ou au bureau. Ces programmes aideront à nous faciliter la tâche lorsqu'il s'agira de communiquer avec vous et de vous tenir au courant.

Le Bureau de la santé rurale (BSR) de Santé Canada continue d'attirer l'attention sur les enjeux de la santé rurale à l'échelon fédéral. En avril 2000, le BSR lancera l'initiative des approches novatrices en matière de santé dans les milieux ruraux et éloignés, dotée d'un budget de 11 millions de dollars. Il s'agit d'une des nombreuses initiatives appuyées par un fonds de 50

millions de dollars annoncé dans le budget de février 1999 pour les innovations en santé rurale et communautaire. Ces initiatives nous permettront de chercher à obtenir du financement pour mettre en œuvre plusieurs des projets que nous considérons comme cruciaux pour l'avenir des soins de santé en milieu rural.

Les projets proposés porteront notamment sur la définition de l'étendue de la pratique, l'établissement d'une licence nationale de suppléance rurale, la définition de protocoles de triage en cas d'urgence et l'acquisition continue de techniques spécialisées avancées pour les médecins ruraux.

J'exhorte chacun d'entre vous à adhérer maintenant à la SMRC et à appuyer ces nouvelles initiatives. C'est ensemble seulement que nous pourrons espérer renverser la vapeur et faire quelque chose. Les deux messages que je n'ai cessé de marteler à titre de présidente depuis deux ans sont les suivants : les soins de santé en milieu rural sont sans pareils et les prestataires de soins dans les régions rurales et éloignées du Canada sont des gens très spéciaux. C'est avec fierté que je vous ai représentés depuis deux ans et j'ai hâte de travailler avec le nouvel exécutif pour continuer à aller de l'avant.

Correspondance : Dr Patricia Vann, a/s SMRC, CP 893, Shawville QC J0X Y0

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Handling violent or aggressive patients: a plan for your hospital

Gordon Brock, MD, CCFP
Jacynthe Bérubé, RN, MSc

CJRM 2000;5(2):63-7

[\[résumé\]](#)

Abstract

Small rural hospitals by nature have difficulty handling the violent or aggressive patient. A successful plan for preparing staff to deal with these cases involves teaching staff how to anticipate when violent or aggressive behaviour may occur, where in the emergency department to place a potentially violent patient, when to request more help, proper body language to employ and the preparation of a protocol for placing emergency restraints.

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Résumé

De par leur nature même, les petits hôpitaux ruraux ont du mal à faire face au problème des patients violents ou agressifs. Pour instaurer avec succès un plan d'action qui prépare le personnel à affronter ces situations, il faut notamment leur apprendre à prévoir les comportements violents ou agressifs, leur indiquer à quel endroit du service d'urgence il faut installer un patient qui risque de devenir violent, quand il faut demander de l'aide et quel langage corporel utiliser. On doit également prévoir un protocole de contention d'urgence.

As rural physicians we face many hurdles in dealing with the violent or aggressive patient: our staff lack experience in dealing with such individuals; our hospitals often lack "safe rooms," where a patient can be kept without danger to him or herself or others; there is often a lack of adequate security personnel, especially during evening and night hours; distances to specialized

units are far, and we often lack clear referral paths to psychiatrists, who are not in oversupply.

Much of the literature on the prevalence and type of violent or aggressive behaviour in the emergency department has come from US¹ or Canadian² tertiary care or inner city hospitals, and these studies are of unknown relevance to rural emergency departments. One small study suggests that violent and aggressive behaviour in rural areas may be more common than is thought. A recent survey of 11 small-town and rural hospital general emergency departments in Quebec found that 96% of the hospital workers surveyed had been victims of verbal aggression, either by the patient or by someone accompanying the patient. Forty-two percent of emergency workers had been the victim of an act of physical violence during the past year, almost always by the patient.³

In that study, hospital staff members appear to have been poorly trained for encounters with violent or aggressive patients. Only 36% of those surveyed stated that they had received some training in how to deal with the aggressive "client"; however, the training appeared to give them confidence: 78% of the workers who had some training felt they could handle an aggressive patient situation adequately, but only 50% of the workers who were not trained felt that they could handle such a situation.³

The time for planning on how to deal with violent or aggressive patients is now, not at the proverbial 3-am encounter. We submit the hospital plan for the Centre de Santé Temiscaming because we believe it is adaptable to most rural health care facilities. Although it is not a comprehensive review of the topic of violence in the emergency department, we believe this protocol is an example of one hospital's attempts to realistically plan and educate staff for the violent and aggressive patient. We believe the basic matrix of this protocol, subject to local adaptations, is suitable for any rural hospital. This plan was developed primarily as an educational and policy tool for the nursing personnel.

High-risk factors associated with violence in the emergency department include alcohol or drug abuse and being male.¹ Although we recognize that both male and female patients are capable of being violent and aggressive, for ease of reading, we refer to the patient as "him" throughout this article.

Although aggressive behaviour can be a symptom of medical or psychiatric illness, most violent behaviour in our society is simple criminality, unrelated to illness. It is often better handled by the police, the prisons and the courts. However, deciding if such behaviour is the result of disease requires a medical and mental status evaluation, the results of which will not be available when that patient is wheeled into your emergency department.

1. Medical and psychiatric causes

The vast majority of patients with psychiatric diseases are never aggressive, dangerous or violent.

Causes of aggressive and violent behaviour in the emergency department are many^{1,4} and include 4 broad categories: Psychiatric Diseases, Organic Brain Syndromes, Drug and Alcohol Abuse, and Personality or Behavioural Disorders.

A. Psychiatric diseases

- Acute mania. This is a relatively common psychiatric cause in our experience. It can be deceptive because the person may be outwardly quite pleasant and jovial — until angered!
- Schizophrenia, especially the paranoid variety. This is quoted as being a common cause of emergency department violence in the US literature,¹ but in our experience it is less common than mania.

B. Organic brain syndromes

By this term we mean confused and occasionally aggressive behaviour when the brain's functioning is disturbed by illness (e.g., encephalitis, hypoglycemia) or head injury, or else by disturbed metabolism (e.g., DTs, drug withdrawal). The hallmark is said to be disorientation, a fluctuating level of consciousness and abnormal vital signs.¹ Our experience is that this is more a problem of the older, in-patient than the emergency department patient.

Mental retardation or dementia. Diagnosis is usually well known to the caregivers and is often obvious to the medical personnel.

C. Drug and alcohol abuse

Drug and alcohol abuse is quite a common cause of violent or aggressive behaviour, in our experience.

D. Personality or behavioural disorders

People with antisocial personalities or borderline personality disorders can be quite noisy and aggressive. These people usually are not classed as having psychiatric illnesses. They can be difficult to handle because they cannot be "talked down," and are often more properly handled by hospital security or the police.

"Acting out" or hysteria, especially in adolescents. These individuals can actually get quite aggressive.

2. When to be on the alert for the possibility of aggressive or violent behaviour

As in any problem, forewarned is forearmed. It is important to know when aggressive or violent behaviour is likely to occur. Consider the following scenarios.

- Family or friends use words such as "out of control," "wild," "crazy" or "angry" to describe the patient.
- Patient is brought to the emergency department restrained by friends, the police or the ambulance attendants.
- Patient is under the influence of drugs or alcohol.³
- Patient has been known to have indulged in violent behaviour in the past, either toward others (e.g., spouse) or has behaved violently in the emergency department (Dr. Alan Buchanan, Associate Clinical Professor, University of British Columbia, Vancouver, BC: personal communication, 1999).

High-risk factors associated with violence in the emergency department include alcohol or drug abuse, and being male.¹ We believe that a history of violence in the past is also a risk factor. A Quebec study found that violent behaviour is more likely to occur at night; this is perhaps related to longer waiting times or to more prevalent alcohol and drug abuse during these hours.³

3. Who should you call for help?

A. On call physician

The physician on call will be needed for diagnosis and treatment.

B. Police

Remember, most violent and aggressive behaviour is criminal in nature, and therefore should not be dealt with via the health care system. Call the police immediately if the patient

- makes any threats, verbal or physical;
- acts destructively (e.g., hits the walls, destroys equipment, hits someone);
- is noisy, hyperactive and won't quiet down after one or two requests;
- is armed (e.g., gun, knife, broken bottle).

Do not inform the patient that you have called the police — this may make him even more aggressive ("I'll take them all on!"). Do not try to negotiate with a person displaying this level of aggression.

If, after you have called the police, the patient seems to quiet down on his own, do not call off the police. Allow the police to come and evaluate the situation. The physician will

evaluate whether it is safe to allow police to leave.

C. Ambulance attendants

If the patient requires more security than can be offered by the nursing staff on duty, or if help is needed to apply or adjust restraints, call the ambulance attendants. (Note: Our hospital has an agreement with the ambulance technicians for them to provide this service.)

D. Administrator

If you have called the police, you should probably inform the administrator on call.

4. Triage: where to place an aggressive or potentially violent patient

A. Patient already in restraints

When the patient arrives already in restraints placed by the ambulance attendants or the police, move him into the Crash Room. This is usually the largest treatment room in the emergency department, large enough to accommodate several persons without crowding the patient, and with enough space to allow staff to manoeuvre even when the patient is on a stretcher. Any medical or monitoring equipment you might need is nearby. Ask any accompanying relatives or friends to remain until you have had time to do a more complete assessment. Initially, do not remove the restraints — this may make the patient more aggressive.

B. Patient not in restraints, but high-risk

When the patient is not in restraints, but is noisy, on alcohol, physically big or "scary" and the physician is not immediately available, the nursing staff should ask the patient to wait in the waiting area in front of the nursing station. In this large, open area, the patient can be easily observed, has less access to hospital equipment, and it is more difficult for him to "sneak up" on staff. Try to keep the patient away from other waiting patients and from his friends or relatives (if you feel that they are worsening the situation). On arrival, the physician can decide whether to examine the patient in the Crash Room (high risk) or Treatment Room (low risk), as below.

C. Low-risk patient

If you feel that the patient is low risk, (i.e, is quiet on arrival, not on alcohol and is older), he may be taken to one of the examining rooms in the outpatient department. Rooms that

have exits at both ends are preferable so that no one feels trapped. Remove any sharp objects from the room beforehand. Leave at least one of the doors open, if possible.

5. How to act in the presence of aggression^{1,5-7}

A. Two's company

If you are frightened or made nervous by a patient, if possible, have another staff member stay with you when you talk to him. You will feel calmer and more reassured and this will have a calming effect on the patient.

B. Stay calm

If the patient is angry and aggressive, speak slowly and politely. Try not to show anger yourself. (This is difficult to do, but showing your anger will only worsen the situation.) Introduce yourself and ask why he is angry or simply ask him to tell you about himself. (Antisocial persons usually love to brag about themselves.) Certainly, don't argue back, and don't agree with the patient if he has any delusions or bizarre ideas. Say that you'd like to help. Allow the patient to "ventilate" a bit, without becoming judgemental yourself. Often, in our experience, after a few minutes the patient does calm down.

If the patient is simply angry, remember that sometimes he may have reasons for that anger: he may be in pain, may have waited hours in a crowded waiting room, may be stressed because of a sick spouse or child. Even a simple statement such as: "I know that you are angry about the 2-hour wait, but it's hard for me if you're yelling. Why don't you tell me what I can do for you, and I'll try to help you out?" may help tremendously. Remember that a little empathy sometimes goes a long way!

C. Position yourself carefully

How far away from the patient should you stand? Stand about 1.5 metres (4 to 5 feet) in front of him, but a bit off to the side; do not face him directly. This is close enough to allow you to develop a rapport, but far enough away so that you do not threaten his personal space and he can't easily touch or hit you. Don't turn your back on him, and always approach him from the front.

D. Body language

Adopt a submissive pose: arms relaxed and hanging down at the side, palms open below your waist and facing the person, shoulders drooping, legs relaxed. Don't look directly into the patient's eyes because this is threatening to most people; focus your eyes on his

chin. This is perceived as less threatening, and you can see his hands easily.

E. Offer a snack

Offer the patient juice, biscuits, a soft drink, and maybe have some yourself. Sharing food is a natural bond between people, and people aren't as likely to argue if they're eating. If the patient is really insistent on a coffee, give it to him, but be aware that he can always throw a hot drink at you. Sitting down together and talking or eating also forms a bond, but do not sit down if the patient refuses to sit down, and make sure you don't sit in a corner, where you can be trapped.

F. Check for weapons

You may decide to check a purse or pockets for weapons, especially if the patient is being admitted.

G. Too hot to handle

Although violence can occur quickly and randomly, in most cases there is some advance warning: anger, agitation, a clenched-fists posture, loud behaviour, yelling.¹ An important rule for nursing staff is that if the patient suddenly stands up and starts to yell or wags or points his finger at you, **GET OUT OF THE WAY AS QUICKLY AS POSSIBLE!** This patient is too hot to handle.⁵ No heroics! Back out of the room quickly. Run if you have to! If there are two of you on duty, run off in opposite directions (he can't chase both of you). If you are really scared, lock yourself into a bathroom or run out of the building if necessary. Carrying a portable phone is a good rule — you can call for help.

We believe that a violent patient is unlikely to hurt the other patients and that the staff is more at risk. If the patient runs out of the hospital — let him go. The physician can then decide whether or not to call the police.

6. Use of restraints

If you are concerned for the safety of the patient or staff, it is permissible in an emergency to apply restraints prior to the arrival of the physician on duty.

View the application of restraints as a procedure, like handling a patient with cardiac arrest. Know when it is necessary and work according to a plan, with teamwork and a clear team leader. Inform the patient: "We are going to have to put you in restraints to help us protect you" (or, "to protect ourselves"). If the patient appears to consent, fine, but once you've decided to apply restraints, don't discuss or negotiate further with the patient. Apply the restraints as quickly and

humanely as possible. Even if the client calms down afterward, the nurses should not remove the restraints. The physician should decide when to do this.

It may be safer to leave the person in a lateral position because aspiration could occur. A soft neck collar may also protect the patient and it makes it more difficult for him to bite someone.

Obtain a written medical order for the restraints as soon as possible. Don't leave a restrained patient alone in the room, and be sure there is some kind of monitoring regime in place. Watch the patient's head — he can still bite.

Summary

For the rural physician, the message is clear. Be sure your hospital has a proper plan for handling the violent or aggressive patient. This plan should specify the resources available, who should be called, and where to put the patient. Train your staff in proper procedure and body language for dealing with this difficult clientèle. Debrief your staff after an incident. Discuss how the situation went, what was done well and what could be improved on the next time.

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Dr. Brock is Staff Physician, Centre de Santé Temiscaming, Temiscaming, Que., and Assistant Professor, Dept. of Family Medicine, and Lecturer, Dept. of Anaesthesia, McGill University, Montreal, Que.

Ms. Bérubé is Director of Nursing and Planning, Centre de Santé Temiscaming, Temiscaming, Que.

This article has been peer reviewed.

Correspondence to: Dr. Gordon Brock, Centre de Santé Temiscaming, CP 760, Temiscaming QC J0Z 3R0; geebee@neilnet.com

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Laparoscopic cholecystectomy in a small rural hospital

Pauline J.H.A. Driessen, MD
Maastricht, The Netherlands
G. Narsing Pradhan, MD, FRCS(Ed)
Goose Bay, Labrador

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Abstract

Objective: To review experience with laparoscopic cholecystectomy (LC) in a small rural hospital.

Setting: A 37-bed rural hospital in Goose Bay, Labrador.

Design: Chart review.

Patients: Sixty-nine consecutive patients with symptomatic cholelithiasis.

Intervention: Laparoscopic cholecystectomy.

Main outcome measures: Rate of successful completion of LC and postoperative morbidity.

Results: LC was successfully completed in 66 out of 69 patients. There was a transient low volume bile leak after LC in 1 patient. Six patients had superficial wound infections. Conversion to open cholecystectomy was required in 2 patients (2.9% conversion rate). LC was postponed in 1 patient. There was no perioperative mortality.

Conclusion: LC in a small rural hospital can be performed with a morbidity that compares favourably with results achieved in large surgical centres.

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Résumé

Objectif : Revoir l'expérience de la cholécystectomie par laparoscopie (CL) dans un petit hôpital rural.

Contexte : Hôpital rural de 37 lits à Goose Bay, au Labrador.

Conception : Étude des dossiers.

Patients : Soixante-neuf patients consécutifs atteints d'une cholélithiase symptomatique.

Intervention : Cholécystectomie par laparoscopie.

Principales mesures de résultats : Taux de réussite de la CL et morbidité postopératoire.

Résultats : On a procédé à une CL réussie chez 66 des 69 patients. Il y a eu une fuite transitoire d'un faible volume de bile après la CL chez un patient. On a constaté une infection superficielle de la plaie chez six patients. Il a fallu procéder à une cholécystectomie ouverte chez deux patients (taux de conversion de 2,9 %). On a reporté la CL chez un patient. Il n'y a pas eu de mortalité peri-opératoire.

Conclusion : Il est possible de procéder à une CL dans un petit hôpital rural avec un taux de morbidité qui se compare favorablement aux résultats atteints dans de grands centres chirurgicaux.

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The advantages of laparoscopic cholecystectomy (LC) over open cholecystectomy in terms of limited postoperative pain, reduction in hospitalization time, recovery periods and improved cosmetic results have been established in a number of studies.^{1–5} These studies also evaluated the safety of LC on patients treated in relatively large hospitals. This report reviews our experience with 69 consecutive patients who were offered LC at Melville Hospital.

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Methods

Melville Hospital is a 37-bed rural hospital located in Goose Bay, Labrador. The nearest large hospital is more than 1 hour away by aircraft. The hospital provides primary care, and secondary care in the core specialties of surgery, gynecology and obstetrics and anesthesiology. The catchment area population is approximately 16 000. A significant proportion of the population comprises Innu and Inuit people in Sheshashit, Nain, Davis Inlet, Hopedale, Makkovik and Rigolet. A high rate of cholelithiasis is present in the native communities. All procedures in the series were performed by the same surgeon.

LC equipment became available at the Melville Hospital in July 1995. Sixty-nine consecutive patients (59 women and 10 men, mean age 36.9 years, range 19 to 68 years) were admitted for LC over a 2-year period. Preoperative assessment consisted of detailed clinical review and investigations (complete blood count, liver function tests, measurement of urea and electrolyte levels and serum amylase, and ultrasonography of the liver and biliary tract). Electrocardiography was performed in patients over 45 years of age.

Ultrasonography was focussed on the characteristics of any gallstones (size, number and location), the diameter of the common bile duct, the size of the gallbladder, the thickness of the gallbladder wall, and assessment of the liver and pancreas.⁶

Patients were offered LC if it was reasonably certain that choledocholithiasis was not present. The presence of acute cholecystitis was not a contraindication, and patients were only excluded if multiple previous abdominal operations made successful LC unlikely. Informed consent was obtained after a detailed discussion about the benefits and possible complications of LC. In keeping with routine surgical protocols, all patients received a Fleet enema the night before surgery and 5000 IU of heparin subcutaneously 2 hours before induction of anesthesia. Patients were requested to void before surgery and a Foley catheter was not inserted during the procedure.

Patients with jaundice or a recent history of jaundice, an elevated alkaline phosphatase level or dilated common bile duct were offered open cholecystectomy locally. Patients who chose LC

were referred for endoscopic retrograde cholangiopancreatography,⁷ retrieval of stone(s) in the common bile duct, if present, and LC.

Operative treatment

LC was performed according to the Dundee technique.⁸ In the majority of cases, the open technique was used for insertion of the infraumbilical trocar and subsequent induction of pneumoperitoneum.^{9–11} The 3 other trocars (subxyphoid and right subcostal along the midclavicular and anterior axillary lines) were inserted under laparoscopic visual control. A thorough laparoscopic assessment of the intraperitoneal organs was carried out before proceeding with LC.

At LC, the gallbladder–cystic junction (the critical anatomical landmark) was initially identified. A short segment of the proximal cystic duct was subsequently mobilized.^{12–14} Cholecystocholangiography was performed in all cases in which the gallbladder–cystic duct junction and cystic duct were not easily skeletalized (8 patients).

Cholecystocholangiography¹⁵

A Veress needle was used to puncture the gallbladder fundus. Bile in the gallbladder was aspirated and 50 mL of contrast medium was instilled into the gallbladder. Films were obtained during further installation of contrast medium, with the patient in a 20° Trendelenburg position and tilted to the right, with traction on the gallbladder released. The cholecystocholangiogram provided an adequate "roadmap." Details of the extrahepatic bile duct anatomy relevant to LC were outlined ([Fig. 1](#)).

After positive identification, the cystic duct was divided between clips. The cystic artery was identified and divided between clips, and the gallbladder was removed from the gallbladder bed. A single dose of cefotetan (1 g, intravenously) was administered intraoperatively. A suction drain was routinely inserted in the right subhepatic space through the subxyphoid cannula and left in situ.

Postoperative management

Routine observations were performed and analgesia was prescribed. Oral fluids and early mobilization was encouraged. The suction drain was removed after 24 hours if drainage was minimal. Heparin subcutaneously was continued after the operation and until the time of discharge. The patients were discharged 24 hours postoperatively if they lived in the area. Patients living in outlying communities were encouraged to stay in the town or in the hospital for 48 hours.

The patients were reviewed at 2 and 4 weeks postoperatively. Liver function tests were performed at both visits.

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Results

LC was successfully completed in 66 patients. One patient (1.5%) had a transient low-volume bile leak postoperatively. The bile leak stopped after 72 hours. On follow-up, over a 1-year period, the patient has remained well, with normal liver function test results.

Six patients (9%) had postoperative, superficial wound infections at the subumbilical trocar site. These resolved with minimal intervention.

In 3 patients LC could not be completed. The rate of conversion to open cholecystectomy was 2.9% (2 out of 69). These 3 cases are described here.

A 37-year-old man had had a perforated peptic duodenal ulcer, 6 years previously, that required emergency surgery through an upper midline incision. Attempts at digital mobilization of periumbilical adhesions through the infraumbilical incision were unsuccessful. LC was abandoned, and open cholecystectomy was performed. Dense adhesions were noted in the epigastrium at open cholecystectomy.

A 63-year-old man was noted to have cirrhosis of the liver with evidence of portal hypertension at laparoscopic assessment. LC was considered unsafe. Through a subcostal incision, partial cholecystectomy was carried out.¹⁶ The portion of the gallbladder embedded in the gallbladder fossa was left in situ. The mucosa of the retained gallbladder wall was ablated by diathermy.

At initial laparoscopic assessment a 20-year-old woman was found to have a tumour (5 × 3 cm) on the anterior margin of the right lobe of the liver just lateral to the insertion of the falciform ligament. This lesion had not been picked up on preoperative ultrasonography. The tumour appeared vascular. Laparoscopic cholecystectomy was postponed until further assessment of the tumour could be performed.

There were no perioperative deaths. Histopathologic examination of the gallbladder, in the majority of cases, showed chronic cholecystitis/cholelithiasis.

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Discussion

Since the first LC was performed in 1987 by Mouret and the first series of 60 laparoscopic cholecystectomies was published by Dubois in 1987, LC has become the operation of choice for

symptomatic cholelithiasis. Numerous publications, mostly from large surgical centres, have exhaustively dealt with the operative technique, complications and the benefits of LC.

The introduction of LC to a small rural hospital comes with specific problems that have to be addressed. These problems include the following.

- The cost-effectiveness of introducing the service. The relatively high start-up costs (the capital equipment, and training of medical and nursing staff) have to be considered in the context of a relatively low caseload.
- Dealing with the sequelae of major complications after LC, if and when they occur. Laparoscopy and LC are invasive procedures associated with a range of minor and major complications.¹⁷ Comparative statistical analysis of the incidence of damage to the major extrahepatic duct system during LC and open cholecystectomy have indicated a higher incidence of more extensive damage to the extrahepatic bile duct system during LC. Reconstructive surgery after LC-related bile duct injuries has correspondingly been more difficult.^{18–20} When major LC-related complications do occur, small rural surgical units could be vulnerable to the suggestion that LC should be performed in larger surgical units.

Patient safety during LC in our unit has been enhanced by the following: the routine use of an open technique to insert the (first) infraumbilical cannula and subsequent induction of pneumoperitoneum has eliminated iatrogenic injuries related to Veress needle or trocar introduction;¹ selective cholecystocholangiography has been performed if a maximum of 10 to 15 minutes of dissection in the triangle of Calot has not identified the gallbladder–cystic duct junction and cystic duct.

Cholecystocholangiography has been safe and easy to perform and has provided adequate information. Cholecystocholangiography is probably safer than transcystic cholangiography. The case for selective cholangiography during LC is now widely accepted.^{12,21} Contrast studies during LC are indicated when the gallbladder–cystic duct junction and cystic duct cannot be positively identified or the relationship of the cystic duct to the common hepatic and common bile duct are uncertain. In these situations, what may appear to be the cystic duct may be the right hepatic duct, common hepatic duct or common bile duct. At least a lateral injury to a major bile duct will have occurred at cannulation for transcystic cholangiography, if the cannulated duct turns out not to be the cystic duct.¹⁵ This may result in duct stenosis in the future. The minimal complication rate in this consecutive series of 69 attempted LCs (2 "justifiable" conversions to open cholecystectomy, 66 successfully completed LCs associated with minor complications, and 1 LC postponed) compares favourably with results achieved in tertiary care centres.^{11,17} Similar results should be reproducible in comparable rural surgical units in Canada.

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This article has been peer reviewed.

Correspondence to: Dr. G.N. Pradhan, Melville Hospital, Station "A", Happy Valley — Goose Bay NF A0P 1S0

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SRPC Conference 2000

CJRM 2000;5(2):74-5

Under the theme "Rural Health Care Through the Life Cycle," the SRPC held its 8th annual conference at the Westin Hotel in Ottawa, April 4–8, 2000. Members reflected on their accomplishments, welcomed new partners to the fray, and planned for the future. It was a time of transition (a new president, vice-president, secretary-elect and treasurer-elect), a time to celebrate (reaching our goal of 1000 members by 2000, and the number of students and residents who have joined) and a time to demonstrate the reach and influence the Society has achieved over such a short period of time.

Representatives from the Royal College, the College of Family Physicians of Canada, the Canadian Medical Association (CMA), PAIRO (the Professional Association of Internes and Residents of Ontario), CAIR (the Canadian Association of Internes and Residents) and the Canadian Federation of Medical Students attended, as did representatives from the allied health professions — most notably, nurse practitioners.

It was obvious that, because these annual meetings attempt to address both policy and practice issues (making the former more relevant, by reference to the latter), it is growing almost beyond the ability of one week to contain it all.

Monday — Day 0: The SRPC Council met to prepare for the AGM. This is one of the few face-to-face meetings the Council manages during the year. The CMA was kind enough to offer its premises for this meeting. The Royal College was active in the preparations for the conference and was there all week to coordinate its smooth flow.

Tuesday — Day 1: The "Society of Rural Physicians Day" sessions explored issues ranging from collaborative practice opportunities for rural physicians and nurse practitioners, to GP surgery, to sleep deprivation research. These sessions were building blocks for the next day's workshops.

The AGM was that evening. The SRPC welcomed David O'Neil as their new President, Dale Dewar as Vice-president, Conleth O'Maonaigh as Treasurer-elect and George Magee as Secretary-elect. The accomplishments, enthusiasm and support of the outgoing President, Dr. Patty Vann,

were celebrated. To underline the huge amount of flying she has done in support of the Society's objectives, she was presented with an oriental rug to fly home on. As immediate past-president, however, she is not off the hook. She continues on the executive for another year.

Whether it was the lateness of the hour, the presence of the cocktail reception next door, or the superb organization by Lee Teperman, the meeting rolled through its business with minimal fuss. Most encouraging was Dr. Kate Miller's report of SRPC activities related to residents. Her participation demonstrated that resident/student members do in fact become paying members when they graduate.

Wednesday — Day 2: This was "Special Conference Day" on "Working Conditions." Many issues were addressed, both in working groups and in plenary sessions. Stress and family issues, on-call expectations and the effects on sleep patterns, and the dynamics of local groups of physicians were explored. Alternate payment plans were described, and the effect on physician providers of workforce issues that occur in other professions (e.g., nursing) were discussed. The discussions from the plenaries and from the small groups were collected, and the conclusions will be the subject of a future SRPC publication. Once again, the breadth of topics confronted was almost more than could be dealt with in the time allotted.

The Honourable Andy Mitchell, PC, MP, Secretary of State (Rural Development) (Federal Economic Development Initiative for Northern Ontario) attended the cocktail reception. He met many of the SRPC leaders and indicated his support for their efforts on behalf of rural communities.

Thursday — Day 3: The conference reverted to its clinical "Life Cycle" theme, with presentations on pediatrics, adolescence, and on the young adult. These were given almost exclusively by rural physicians from such places as Sioux Lookout, Terrace Bay, Revelstoke, Shawville, Chicoutimi, Hinton and Eganville, amply demonstrating that rural physicians are quite capable of stepping into the teaching role and of being a resource to their peers.

For those with the energy to continue the party into the evening, Tucker's Marketplace in Ottawa's Byward Market was entertained by the talents of rural docs and their spouses, both in song and on the fiddle. Shades of St. John's!

Friday — Day 4: The "Life Cycle" theme continued. There were clinical sessions related to adults and seniors, and a cluster of sessions on chemotherapy in rural areas, management of pain in palliative care and the issues that surround the setting up of a palliative care service in a rural area. It was evident that a great deal of knowledge exists in these areas which is rural-specific, but that there are barriers to extending its benefits to rural Canada in general.

Saturday — Day 5: New to the annual meeting, and a testament to the numbers of interested students, was a whole day devoted to their interests. It included a discussion of boundary issues

and practical issues, such as casting and intubation.

Concurrently, the Society ran its Rural Critical Care Course, as well as ALARM (Advances in Labour and Risk Management) and ACLS (Advanced Cardiac Life Support).

Sunday — Day 7: The organizers rested. . . .

Could any more have been stuffed into 6 days? I doubt it. Is there any other conference that addresses rural health issues in as comprehensive a manner? I don't think so. Will you be at the conference next year? I hope so. As a rural physician or healthcare provider, you owe it to yourself.

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Rural patient stories / physician management narratives 2. Mental health care

James T.B. Rourke, MD (Chair), James H. Goertzen, MD, George Goldsand, MD, Sharon N. Hatcher, MD, Paul W.H. Humphries, MD, Stuart J. Iglesias, MD, Sarah Mackinnon, MD, Lise Morin, MD, Sarah-Lynn Newbery, MD, Conleth O'Maonaigh, MB BCh, Paul Rainsberry, PhD, Joshua Tepper, MD, Carl Whiteside, MD, Mark E. Whittaker, MD
Working Group on Post-graduate Education for Rural Family Practice

For a [description of the Working Group](#) please see the end of this article.

CJRM 2000;5(2):80-1

Abstract

In developing the "Postgraduate Education for Rural Family Practice. Vision and Recommendations for the New Millennium" report,^{1,2} the Working Group felt it was important to illustrate rural family practice with a series of rural patient stories / physician management narratives.¹⁻⁴ These case studies demonstrate the broad range of knowledge, skills and attitudes used by rural family physicians in responding to the needs of their patients. They provide examples of rural maternity care,⁴ mental health care, long-term pediatric genetic disease care and trauma care. They are based on real-life dramas from diverse rural locations across the country. Certain details of these patient stories / physician management narratives have been altered or are based on composite examples to protect the identity of the individuals involved. The second in the series, a case study on mental health, appears here. The first, [on rural maternity care](#), appeared in CJRM's Winter 2000 issue.⁴

Patient's history

A young woman was brought into the rural hospital emergency department on a Friday evening by the on-call volunteer ambulance crew. She had taken approximately one hundred 325-mg tablets of acetaminophen after an evening of drinking at a house party. Her husband had appeared at the house party and physically threatened her; this apparently was a common occurrence in their relationship. When the patient arrived at the emergency department the charge nurse noted

that she smelled of alcohol, was drowsy, but was easily awakened. A girlfriend confirmed that the patient had also consumed about 6 beers.

Examination findings

The on-call family physician arrived approximately 5 minutes after his stat call to the emergency department. The charge nurse relayed the patient's available history and the admission vitals: RR 15/min, BP 110/70, HR 70/min, T 36.9°C. In addition, the family physician noted that an IV of N/S had been established, nasal prongs initiated at 3 L/min, and the attached cardiac monitor confirmed a sinus rate with a periodic ectopic beat. A Glasgow Coma Scale of 13/15 was quickly determined. Upon rousing the patient, portions of the history were confirmed: the acetaminophen had been consumed about 2 hours earlier. As the family physician paused briefly after completing the physical examination, the laboratory technician appeared, called in by the charge nurse for the expected laboratory investigations: CBC, RBS, Na, BUN, Cr, LFTs, osmolality, acetaminophen and salicylate levels. Preparations for the arterial blood gas followed.

Knowledge: Management of poisonings, including acetaminophen overdose

Skills: Tailored physical examination, interpreting Glasgow Coma Scale, effective team communication

Attitude: Comfort in limits of knowledge in reviewing management in textbook; confidence in skills of nursing staff

Plan: As the nursing staff prepared activated charcoal, the family physician slipped into the doctor's lounge to review the protocol for management of acetaminophen overdose. The patient reluctantly drank the charcoal slurry while the acetylcysteine infusion was being initiated. She was admitted to a critical bed in the hospital and remained stable overnight. Acetaminophen levels peaked 4 hours after admission and confirmed the necessity of the acetylcysteine. The arterial blood gas and salicylate levels proved normal.

Saturday morning the patient's family and social situation were briefly reviewed by the on-call family physician. Her psychiatric assessment revealed previous treatments for depression, mood complaints, and vegetative symptoms, thus supporting the diagnosis of a current depression. She was feeling safe in hospital and, although overwhelmed, was not suicidal. She agreed to the management plan of remaining in hospital over the weekend, starting an anti-depressant, and having further involvement with a supportive counsellor. She was transferred to the medical ward (no designated psychiatric beds in the hospital), and a referral was made to the on-call community mental health worker. Later Saturday afternoon, thorough family, social and psychological assessments were carried out by the on-call worker.

Knowledge: Spousal abuse, suicide risk, depression

Skills: Obtaining psychiatric, family and social history; effective team communication, patient-centred counselling skills, crisis management

Attitude: Comfort and sensitivity with spousal abuse victims, confidence in role of team

Plan: Monday morning a hospital discharge was arranged. The patient would spend the next 2 weeks in a women's shelter, where she'd be safe from her husband. Follow-up visits with the community mental health worker and family physician were scheduled.

Over the month the patient's depression improved as a result of the supportive counselling and medication. With new insight into her abusive relationship she was able to initiate divorce proceedings and apply for an upgrading employment program.

Knowledge: Community resources for spousal abuse, management of depression

Skills: Patient-centred counselling skills

Attitude: Sensitivity to spousal abuse victims.

The Working Group was a diverse group, comprising members of the College of Family Physicians of Canada (CFPC), the Society of Rural Physicians of Canada (SRPC) and a representative from the Royal College of Physicians and Surgeons of Canada. The group included practising physicians from rural and remote communities across Canada whose practice profiles included special skills and interests in such areas as anesthesia, obstetrics and emergency work. It included physicians involved in teaching both students and residents for rural practice, family medicine residents, rural program coordinators, a postgraduate family medicine program director, and an associate dean of postgraduate medical education. The group was directed "to review the current state of postgraduate education for rural practice in Canada and to outline an appropriate curriculum to prepare new family physicians for the challenges of rural practice."¹⁻³ The report was endorsed by the SRPC in April 1999 and approved by the CFPC Board in May 1999.

This article has been peer reviewed.

Correspondence to: Dr. James Rourke, Director, Southwestern Ontario Rural Medicine Education, Research and Development Unit, 53 North St., Goderich ON N7A 2T5

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The occasional peripherally inserted central catheter

Keith MacLellan, MD
Shawville, Que.

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Peripherally inserted central catheters (PICCs) are becoming a popular means of ensuring long-term venous access in patients who require parenteral nutrition, chem-otherapy, treatment with other medications, or who have poor peripheral veins. In many medical centres, the PICC is inserted by the nurses. These catheters are easily maintained and can be left in place for months: the ingenious valve at the tip allows for once-weekly flushing and a minimum of fuss and bother. Patients find them comfortable, and, usually, blood samples can also be taken through the catheter. In many ways PICCs replace the Hickman catheter; they are simpler and safer. They are ideal for rural hospitals and there is no reason why the rural doctor cannot insert the occasional PICC.

Here's how.

Indications

- Long treatment duration — patients who require 6 to 12 weeks of therapy
- Patients who require several weeks of antibiotic therapy
- Infusions of hyperosmolar solutions (total parenteral nutrition)
- Infusions of vesicant chemotherapy
- Long-term intravenous rehydration
- Continuous narcotic infusions
- Lack (or anticipated lack) of vas-cular access
- Location (e.g., the need for inter-mediate IV therapy at home)
- Patient or clinician preference

Contraindications

- Inadequate antecubital veins

- Clinician's inability to locate a large antecubital vein
- Pre-existing skin infection
- Anatomical distortions from surgery or trauma (e.g., axillary dissection, mastectomy, burns and scarring)
- Severe bleeding disorder
- Severe immunocompromised state

Catheter tip location

The preferred placement of the catheter tip is usually in the superior vena cava. Under no circumstances should the tip lie in the right atrium, where long-term erosion of the atrial wall may occur. The right arm of the patient is the easier limb to use. The basilic vein in the antecubital fossa allows the most direct route to the superior vena cava. With a tape measure, measure along the course of the vein from the antecubital fossa to the clavicular head. Then measure from the clavicular head to the third intercostal space (feel for the second rib below the clavicle). Add the amount of catheter that is to be left out of the arm for dressings and repairs ([Fig. 1](#)).

Procedure

1. Place the patient supine with the arm extended at 90° to the trunk.
2. Place a tourniquet on the upper arm near the axilla ([Fig. 2](#)).
3. Prepare and drape in the usual manner ([Fig. 2](#)).
4. Fill three 10-cc syringes with sterile normal saline.
5. Remove catheter from the tray, irrigate through the priming hub with normal saline and irrigate the catheter connector.
6. Perform the venipuncture, with or without local anesthetic, and insert the introducer catheter into the vein, then withdraw the needle. Bleeding can be minimized by applying thumb pressure proximal to the introducer catheter ([Fig. 3](#)). Most kits come with a guide wire and dilator (Seldinger technique) to make communication easy.
7. Release the tourniquet through the sterile drape without contaminating the field.
8. Insert the flushed PICC through the introducer catheter to the depth determined (e.g., 1 dot = 10 cm, 2 dots = 20 cm).
9. Have the patient turn his or her head, chin on shoulder, toward the venipuncture site to help prevent cannulation of the internal jugular vein.
10. Once the PICC is in place, remove the introducer catheter by sliding it to the distal end of the PICC.
11. Place the suture wing around the catheter near the venipuncture site.
12. Remove the stiffening stylet from the PICC ([Fig. 4](#)).
13. Using sterile scissors, cut the PICC to the desired length, leaving at least 4 to 7 cm of the catheter.
14. Slide the oversleeve onto the catheter and insert the connector into the catheter ([Fig. 5](#)).

15. Slide the oversleeve up onto the connector, securing catheter in place ([Fig. 6](#)).
16. Aspirate a blood sample to confirm placement. (This may be difficult with a 3 French.)
17. Irrigate with 10 cc of normal saline.
18. Apply an injector cap and suture or tape the suture wing ([Fig. 7](#)).
19. Place a folded 2 × 2 gauze just below the insertion site and cover with a transparent dressing (Fig. 7).
20. Confirm catheter placement location by radiogram.

Now, you don't want to be forcing the catheter through the vein, and, of course, the wire stylet should slide out easily. Carefully remove any talc from your gloves before insertion; this will minimize inflammation. The patient's arm should not be held over his or her head when the catheter is open.

Finally, always use at least a 10-cc syringe for any irrigations or aspirations — smaller syringes may exert too much pressure on the line.

Maintenance

Inspect and flush the catheter once a week.

The company listed below has full documentation, including nursing protocols and videos, to get your hospital going. What are you waiting for?

Bard Canada
2345 Stanfield Rd.
Mississauga ON L4Y 3Y3
Western Canada: 800 268-2862
Eastern Canada: 800 387-7851
Ontario: 800 387-9473

This article has been peer reviewed.

Correspondence to: Dr. Keith MacLellan, PO Box 609, Shawville QC J0X 2Y0

Country cardiograms case 16

Charles Helm, MD, CCFP
Tumbler Ridge, BC

CJRM 2000;5(2):85

Case presentation

A 58-year-old man presents at a small rural hospital in northern BC with chest pain consistent with ischaemia. Results of a recent ECG were normal. An ECG performed at the time of presentation shows evidence of inferior injury with posterior extension. Thrombolysis is administered, and a subsequent ECG is performed (Fig. 1). Vital signs remain stable.

What is your interpretation?

How should this rhythm be treated?

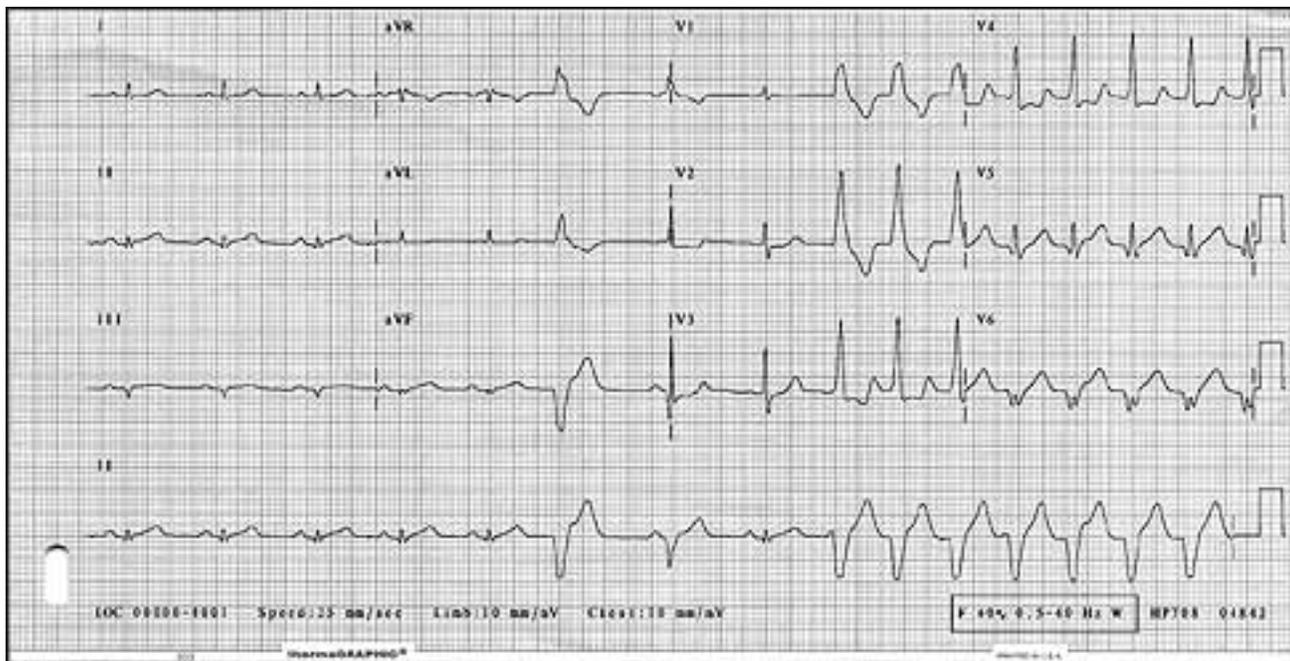


Fig. 1. Electrocardiogram performed after administration of thrombolysis.

For the Answer see [page 96](#).

"Country cardiograms" is a regular feature of the Canadian Journal of Rural Medicine. In each issue we will present an electrocardiogram and discuss the case in a rural context. Please submit cases to Ms Suzanne Kingsmill, Canadian Journal of Rural Medicine, Box 1086, Shawville QC JOX 2Y0.

This article has been peer reviewed.

Correspondence to: Dr. Charles Helm, Box 1690, Tumbler Ridge BC V0C 2W0;
drhelm@pris.bc.ca

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Ten ways to achieve a positive locum experience

Edited by Sarah MacKinnon, MD
Huntsville, Ont.

CJRM 2000;5(2):86

1. Every locum, resident and medical student is an opportunity for recruitment. Communities prepared to meet and greet potential physicians are more likely to retain locums for the long term. It is important to remember that every physician has a friend looking for employment.
2. A locum reference (past locum who agrees to be contacted for information) is the best publicity that the locum experience was enjoyable.
3. Flexible duration and negotiable call will be attractive to locums.
4. Recommending the locum to patients improves continuity and locum satisfaction.
5. The knowledge of the office staff is a valuable tool for locums. Temporary staff working with locums create a vacuum of inexperience.
6. Appropriate accommodations should be provided where possible. If not provided, a list of potential accommodations should be available.
7. A written contract protects both the locum and the community physician. This should set out the overhead split, the division of any additional remuneration (e.g., Scott Sessional fees) and a daily minimum.
8. All duties (e.g., ED, on-call, OB, inpatient, anesthesia, outreach, backup) should be agreed in advance and included in the locum contract. Communities should not assume that locums will take extra call, although many locums will appreciate the offer.
9. A verbal or written handover, including inpatients, term or complicated pregnancies, chronic narcotic users and other special patients, enables the locum to better serve the patient population. Furthermore, a list of emergency contacts, specialty backup, community resources, transfer protocols, etc. facilitates the locum's transition into the community.
10. Many locums enjoy companionship. If community activities are ongoing, lists and invitations are helpful.

Editor's note: We invite physicians to speak out on issues that concern them. Please send submissions to Suzanne Kingsmill, Managing Editor, CJRM, Box 1086, Shawville QC J0X 2Y0; cjrm@fox.nstn.ca

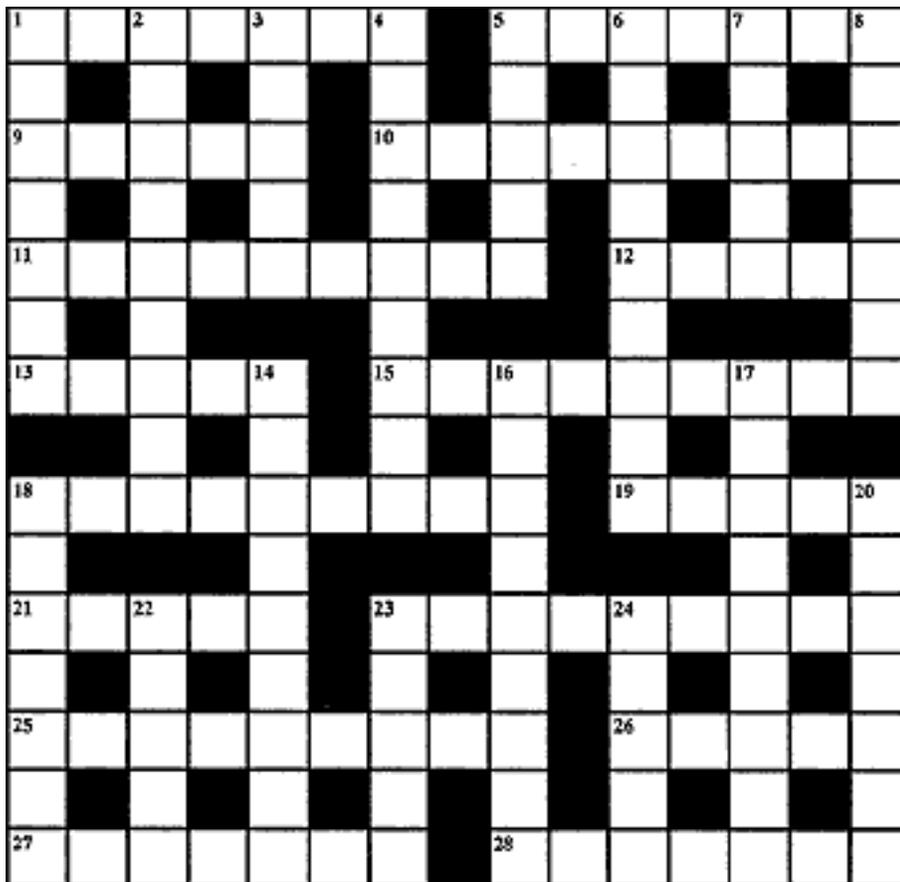
© 1999 Professional Association of Internes and Residents of Ontario (PAIRO); reprinted with permission.



Cryptic Crossword

Lee Teperman
Charteris, Que.

CJRM 2000;5(2):87



Across

1. Man embodying the auto body (7)
5. & 9. Listen and others have to listen, occasionally (4,3,5)

Down

1. & 18. & 22. Sheared indifference? (3,4,3,4,5)
2. Stamp artist collected by big wheel on meals? (9)

- | | |
|--|--|
| 9. See 5 Across | 3. Very disturbing wise opinions (5) |
| 10. 'Tis proper to take with essential medication (9) | 4. Position or article of the 22 (9) |
| 11. Reason for wearing a coat if its arm is torn off (9) | 5. Take husband and live with married women (5) |
| 12. Strange man or woman (5) | 6. Rule and object education has put under a new light (9) |
| 13. Red Chinese lacking a level of saturation (5) | 7. Love as an anchor, we hear (5) |
| 15. A kid going after one will be uncomfortable (3,2,4) | 8. Clotheshorse dined, apparently some time after 28 arrived (3,4) |
| 18. Cross football player lacking heart or arms (9) | 14. The gallon jar from which comes primitive life form (9) |
| 19. Follow directions of these rulers (5) | 16. Terribly hopeless cases, true followers who have strayed (4,5) |
| 21. What very big ears do very well (5) | 17. Unresolved emotion over 10, good sign on medical chart (9) |
| 23. Bitter medicine for Canada and dirty city's secret (6,3) | 18. See 1 Down |
| 25. Alien gods played together (9) | 20. Star given most trouble with problem that has an answer (7) |
| 26. Time-honoured ritual of basic beginners beat (5) | 22. See 1 Down |
| 27. Distillate that can cure, not heal (7) | 23. Cool, in centigrade? (5) |
| 28. Early arrival of groom, married that is (7) | 24. Bizarre behaviour of devout Reform members (5) |

The answers to this Cryptic Crossword are on [page 91](#).

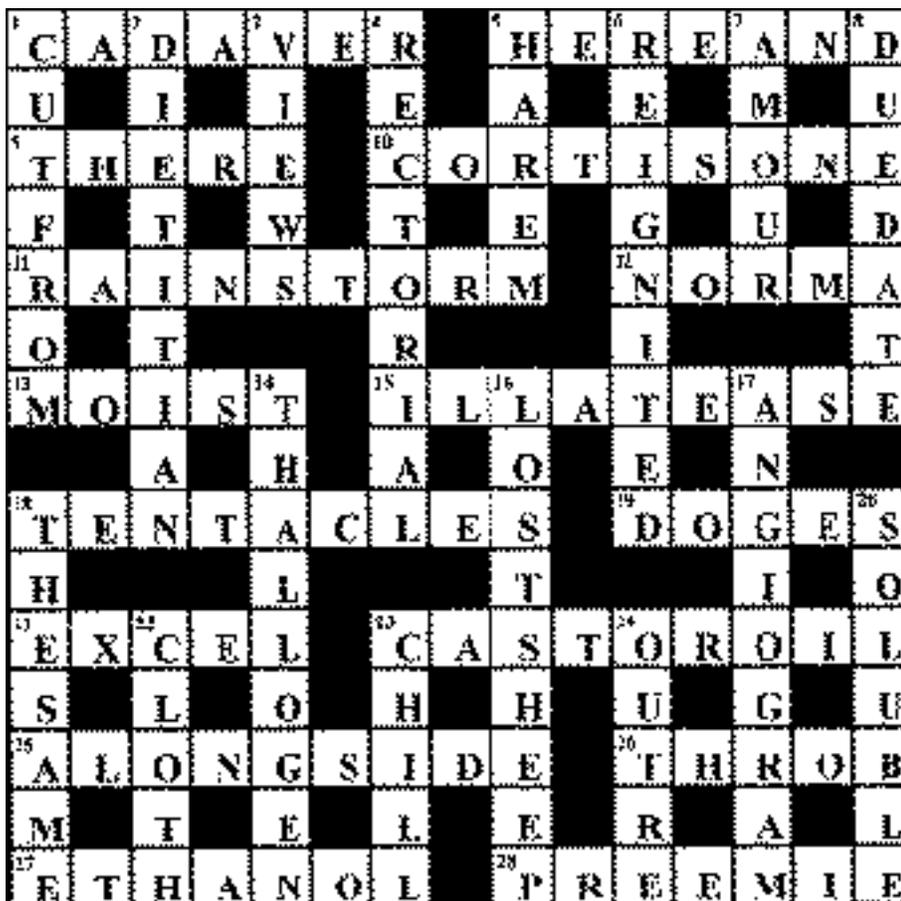
For instructions on how to tackle a Cryptic Crossword see the [June 1996](#) issue of CJRM or access through SRPC's Web site (www.srpc.ca), or contact Lee Teperman, Box 893, Shawville QC J0X 2Y0; tel/fax 819647-3971; bullhits@infonet.ca



Answers to Cryptic Crossword

Lee Teperman

CJRM 2000;5(2):91

The clues to this Cryptic Crossword can be found on [page 87](#).

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The healing eye of Horus

Sterling Haynes, MD
Westbank, BC

CJRM 2000;5(2):88

The healing eye of Horus represented both health and happiness to ancient Egyptians. In the mythological story, Horus, a youthful Egyptian sun god, wished to avenge the death of his father, Osiris. Osiris had been killed by the god Set (or Seth). Isis had been the wife of Osiris and was known as the patron goddess of healing, but she supported Horus in his desire to kill Set. Although she advocated Set's death she was generally benevolent. Her temples of healing were hospitals staffed by women. The ill and maimed flocked to the shrines of Isis, where female priest healers would dispense medication and cures.

There was a battle of revenge between Horus and Set. In the heat of battle Set plucked out the eye of Horus with his thumb. A goddess picked up the eye and reinserted it into Horus' empty socket. Mythologists say that Horus' sight was restored and Set was mutilated but not killed. Horus has since been portrayed as having the head of a falcon, with unsurpassed raptor's sight, and the body of a man. The shape of Horus' eye is a modified picture of the eye of a peregrine falcon.

To this day the healing eye of Horus, known as the Udjat eye, can be seen on the back of a US \$1 bill at the top of the pyramid. The eye is capped by the apex of the pyramid and surrounded by the rays of the sun.

If you are interested in your own health and happiness you may from time to time see a practitioner. On his or her or your own prescription pad you will see a stylized symbol. The healing eye of Horus has been modified to the following.



While the healing eye of Horus takes care of health and happiness, the crux ansata represents life and immortality. It was thought that the following shape symbolized the vagina, the vertical rod the penis.



These were combined as the crux ansata.



The symbol was the representation of immortal life and is now the universal symbol for the female gender and for Venus.

© 2000 Sterling Haynes



Medical journals on the Internet

Barrie McCombs, MD, CCFP, CCFP(EM)

CJRM 2000;5(2):89-91

I got my education out behind the barn, I ain't a-fooling, no-o-o sir-ee-ee. Passed each examination, out behind the barn, but it almost made a wreck out of me. -
sung by Little Jimmy Dickens, circa 1950

I first met Mr. Hiram Pochondriac¹ while doing a locum in East Overshoe, Alberta.² Hy is an avid reader, and loves the medical column in Time magazine. A few days after each issue arrives, Hy appears at the office, suffering from the "Disease of the Week." After a few visits, I found the perfect solution to Hy's problem,³ but not before he gave me the following list of his favourite medical journal Web sites.

Who says we can't learn from our patients!

Tables of contents, abstracts, full-text articles

A typical journal Web site provides the table of contents of recent issues. Some will send you the table of contents by email, providing a quick and easy way to browse a favourite journal. Most journals also provide abstracts, and an increasing number provide the full text of articles online. Others provide this service only to paid subscribers, or charge a fee to send a photocopy. This column concentrates on journals that provide full text. A few other journals are included because they are popular, or relevant to rural practice.

Legend:

TOC: Table of contents

EMAIL: Table of contents available by email

ABS: Abstracts

FT-A: Full text of all articles

FT-S: Full text of selected articles
REP\$: Reprints available for a fee

Hy's favourites

Canadian Family Physician

www.cfpc.ca/CFP/canadian.htm

Sponsor: College of Family Physicians of Canada

Content: TOC, ABS, FT-S

"Critical Appraisal" column reviews important articles in other journals. "MotherRisk" covers evidence-based prenatal and infant care.

Canadian Medical Association Journal

www.cmaj.ca/

Sponsor: Canadian Medical Association

Content: TOC, EMAIL, ABS, FT-A

"Clinical Resources" link provides useful resources, including an excellent collection of clinical practice guidelines.

British Medical Journal

www.bmj.com/bmj/

Sponsor: British Medical Association

Content: TOC, EMAIL, ABS, FT-A

Web site is indexed by both issue and topic. Read an article, then use "related articles" link to find other articles on the same topic.

Pediatrics (USA)

www.pediatrics.org

Sponsor: American Academy of Pediatrics

Content: TOC, EMAIL, FT-A

Provides links to "related articles" or articles by the same author. If you have a Palm Pilot hand-held computer, you can automatically download abstracts.

Evidence Based Medicine (USA, Great Britain)

www.acponline.org/journals/ebm/ebmmenu.htm

Sponsors: American College of Physicians, BMA

Content: TOC, ABS

This excellent synopsis journal reviews significant papers in other journals.

Honourable mention

Canadian Journal of Rural Medicine (CJRM)

www.cma.ca/cjrm/

Sponsor: Society of Rural Physicians of Canada

Content: TOC, FT-A

Journal highlights include the how-to column "The Practitioner," the "Country Cardiogram" quiz, and this column, which provides direct links to all the Web sites.

American Family Physician

www.aafp.org/afp/

Sponsor: American Academy of Family Practice

Content: TOC, FT-S

Contains patient-oriented information as a regular feature.

Annals of Internal Medicine (USA)

www.acponline.org/journals/annals/

Sponsor: American College of Physicians

Content: TOC, ABS, FT-A

Provides full-text articles as well as non-technical summaries for the public.

Journal of the American Medical Association

jama.ama-assn.org

Sponsor: American Medical Association

Content: TOC, EMAIL, ABS, FT-A (temporary)

At the time of writing, full-text access was free, but in the future it will be limited to subscribers.

The "Patient Page Index" link provides information suitable for patients.

Postgraduate Medicine (USA)

www.postgradmed.com/

Content: TOC, ABS, FT-A

Sponsor: McGraw-Hill Publishing

As well as clinical articles, one highlight is the "Digital Doc" column on the medical use of computers.

Other useful journals

Paediatrics & Child Health (Canada)

www.pulsus.com/paeds/

Sponsor: Canadian Paediatric Society (CPS)

Content: TOC, ABS, REP\$

Web site provides free access to the full text of guidelines issued by the CPS.

Canadian Journal of Surgery

www.cma.ca/cjs/

Sponsors: Six Canadian specialty societies

Content: TOC, ABS, FT-A

Web site provides an index by both subject and author.

CJEM

www.caep.ca

Sponsor: Canadian Association of Emergency Physicians (CAEP)

Content: TOC, ABS

Abstracts are under the "CAEP Library" link.

New England Journal of Medicine (USA)

www.nejm.org

Sponsor: Massachusetts Medical Society

Content: TOC, EMAIL, ABS, REP\$

This journal has a high readership, but its topics are often not relevant to primary care. Full text of articles available only to subscribers.

Journal of Family Practice (USA)

www.jfampract.com

Sponsor: Dowden Publishing

Content: TOC only

POEMs (Patient Oriented Evidence that Matters) section contains the full text of these brief topic reviews.

Archives of Family Medicine (USA)

archfami.ama-assn.org/

Sponsor: American Medical Association

Content: TOC, EMAIL, ABS, FT-A (temporary)

At the time of writing, full-text access was free, but in the future, it will be limited to subscribers.

Family Practice Management (USA)

www.aafp.org/fpm/

Sponsor: American Academy of Family Practice

Content: TOC, ABS, FT-S

This journal publishes excellent practice management hints. Use "annual index" to browse by topic. It has several articles on "Time management" that are relevant to rural physicians.

British Journal of General Practice

www.rcgp.org.uk

Content: TOC, full text of editorials

The Lancet (Great Britain)

www.thelancet.com

Sponsor: Elsevier SA

Content: TOC, ABS, FT-S

Registration required to read more than TOC.

Journal of Rural Health (USA)

www.nrharural.org/pagefile/rh.html

Content: TOC, ABS, REP\$

Sponsor: National Rural Health Association

Web site is indexed by topics, rather than issues. It is the only rural medicine journal I could find, other than CJRM.

Related Web sites

Medical Information Service (MIS)

www.ruralnet.ab.ca/medinfo/journals/

The "journals" section of the MIS Web site contains links to online journals, including those listed in this article. It also contains suggestions on how to make efficient use of your reading time.

Adobe Acrobat Reader (Version 4.0)

www.adobe.com/products/acrobat/readermain.html

Some journals provide the full text of their articles in the PDF format to display and print the text and diagrams exactly as they appear in the journal. You can download and install the free "Acrobat Reader" program from the Adobe Web site. The download process is quite easy. If you are "technically challenged," hire a teenager to show you how.

PubMed (USA)

www.ncbi.nlm.nih.gov

As well as providing a free and easy way to use MEDLINE search engine, the PubMed section of the National Center for Biotechnology Information (NCBI) Web site contains a powerful "Journal Browser" feature that displays the latest articles in a particular journal.

OSLER (Canada)

www.cma.ca/osler/

The Canadian Medical Association Web site provides access to OSLER (OVID Search: Link to Electronic Resources), a powerful MEDLINE search engine. Service is free to CMA members,

but registration is required.

WebDoctor (Canada)

www.gretmar.com/webdoctor/

This useful Web site includes an index of medical journals that publish the full-text of their articles online. Index is organized by medical specialty.

Medical Matrix (USA)

www.medmatrix.org

A medical index Web site with an extensive list of medical journals. It is designed for, and managed by, family physicians. Usage is free, but registration is required.

Society of Obstetricians and Gynaecologists of Canada (SOGC)

sogc.medical.org

The SOGC Web site provides full text of many of their guidelines, which are published in their Journal.

Footnotes

1. The name has been changed to protect the author!
2. Located just across the border from Crocus, Saskatchewan.
3. I secretly cancelled his subscription to Time.

Barrie McCombs, MD, Director, University of Calgary Medical Information Service, Calgary, Alta.

Correspondence to: Dr. Barrie McCombs, Director, University of Calgary Medical Information Service, 3330 Hospital Dr. NW, Calgary AB T2N 3Z0; bmccombs@ucalgary.ca;

www.ruralnet.ab.ca/medinfo/

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Letters / Correspondance

CJRM 2000;5(2):94

Rural CME

I read with great interest "Rural CME — redefining the beast" in CJRM's Fall 1999 Rural CME section.¹ I concur with the premise of the column and the 3 insightful principles of what constitute relevant rural continuing medical education. I offer the following random thoughts for consideration.

1. Rural CME is an opportunity to educate urban physicians, especially specialists to whom rural physicians refer, on the unique issues and challenges that rural physicians face. As is implicit in point #2 of the article, one key role of a rural faculty member is to identify the unique circumstances under which rural physicians practise, and to identify how literature-based knowledge can be applied practically under these conditions. A successful rural CME program should not only draw participants from both urban and rural areas, but be an open channel for exchange of experiences to allow participants to reach a mutual understanding about the differences and similarities of their practices.
2. Ideally, rural CME should be conducted in rural settings, preferably drawing participants from the host communities, and with the involvement of the specialists to whom the participants refer. Including an urban specialist in a rural CME activity is reasonable, but efforts should be made so that the local specialist can be an integral part of any discussions.
3. Rural CME ideally should address not only the needs of rural family physicians, but also those of rural specialists. Although educational needs for these 2 groups may be different, the application of knowledge in a rural setting is very similar for both. Rural CME that emphasizes knowledge and skill applications not only is mutually helpful to both family physicians and specialists, but it also forms a basis of solidarity for the alignment of needs, lobbying for resources and for mutual support.

As an urban-based physician I welcome the insights that our rural colleagues shed on this very important CME issue and I look forward to future discussions.

Kendall Ho, MD, FRCPC
Associate Dean and Director
Division of Continuing Medical Education
University of British Columbia
Vancouver, BC

Reference

1. Upcoming events: Rural CME — redefining the beast. [Can J Rural Med 1999;4\(4\):237.](#)
-

Correction

In the first article¹ of our continuing series "Rural patient stories / physician management narratives," which is appearing in the Case Report section of CJRM, Dr. George Goldsand's name was inadvertently omitted from the list of authors (the Working Group on Postgraduate Education for Rural Family Practice). We apologize for this error.

Reference

1. Rourke JTB, Goertzen JH, Hatcher SN, Humphries PWH, Iglesias SJ, Mackinnon S, et al. Rural patient stories / rural physician management narratives. Rural maternity care. [Can J Rural Med 2000;5\(1\):21-3.](#)
-

Please send us your comments and opinions. Letters to the editor should be addressed to: Canadian Journal of Rural Medicine, Box 1086, Shawville QC J0X 2Y0, fax 819 647-2845; cjrm@fox.nstn.ca

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Literature / Littérature scientifique

CJRM 2000;5(2):95

This month the Literature of Rural Medicine examines some recently published studies that address aspects of rural hospital care. The articles are as varied as is the pathology that may be encountered in a rural setting, ranging from cancer care, to trauma management to the use and support of traditional and alternate providers.

Childhood farm injuries. Zietlow SP. *Am Surg* 1999;65(7):693-7.

This review of childhood farm injuries spans a 6-year period (1991–1997) during which 143 children under the age of 18 were admitted to the Mayo Medical Center (a Level I trauma centre) with severe agriculture-related trauma. The authors found that half were admitted directly from the scene, and half were admitted via rural hospital emergency rooms. The acuity of the cases was evidenced by the fact that 2/3 required immediate operative intervention, and 1/3 were admitted to an ICU. Transport times were significant (mean 21/4 hrs) and distances long (mean 55 miles [88 km]), with only 25% transported with advanced life support. Severe permanent disability was present in 1/3 of children.

The authors use their data to focus attention on injury prevention programs. Rural hospitals may wish to review their preparedness for what continues to be a major cause of rural trauma and severe permanent disability.

Systematic review of cancer treatment programmes in remote and rural areas. Campbell NC, et al. *Br J Cancer* 1999;80(8):1275-80.

In a related publication a group in the UK reviewed published evidence on the effectiveness of, and problems with, the provision of oncology services in remote and rural areas. The group reviewed references between 1978 and 1997 and based their report on 15 papers located. With respect to the quality of the evidence, they remarked that studies were small and only 2 were controlled, and therefore the evidence was "suggestive rather than conclusive." Nevertheless, they state that "there were some indications that shared outreach care was safe, and could make

specialist care more accessible to outlying patients." They also noted that tele-oncology might be an "acceptable adjunct" but that more studies were required.

A rural cancer outreach program lowers patient care costs and benefits both the rural hospitals and the sponsoring academic medical center. Desch CE, et al. *J Rural Health* 1999;15(2):157-67.

The Medical College of Virginia conducted an audit of the Rural Cancer Outreach Program (RCOP), which linked their academic cancer center (MCC) with two rural hospitals. Total cost of care was compared to pre-RCOP costs, as well as the financial impact of the program on both the academic centre and the rural sites. All costs related to the care of 1745 cancer patients were reviewed. The authors found that "the net annual cost per patient fell from \$10,233 to \$3,862" and profits were generated at the rural sites. At the academic site the RCOP generated sufficient revenue to cover costs. Overall, they found that the RCOP "provided state of the art care near home for rural patients and was associated with lower overall cancer treatment costs."

Do advanced practice nurses and physician assistants benefit small rural hospitals? Bergeron J, et al. *J Rural Health* 1999;15(2):210-1.

This article describes a survey of 285 rural US hospitals to assess the degree to which these hospitals used the above practitioners as an alternative to scarce primary care physicians. The authors found that "most of the hospitals used the practitioners; 70% used nurse practitioners; 30% used physician assistants; and 20% used both." They also found that, in spite of some negative reaction to the use of these practitioners, benefits were quantifiable in terms of "reduced recruitment costs, increased revenues, and increased service offerings."

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Laparoscopic cholecystectomy in a small rural hospital



Fig. 1. Cholecystocholangiogram of gallbladder and common bile duct.

© Michelle R. Baikie

[\[Return to text\]](#)



Rural patient stories/rural physician management narratives

James T.B. Rourke, MD (Chair)*; James H. Goertzen, MD; Sharon N. Hatcher, MD; Paul W.H. Humphries, MD; Stuart J. Iglesias, MD; Sarah Mackinnon, MD; Lise Morin, MD; Sarah-Lynn Newbery, MD; Conleth O'Maonaigh, MB BCh; Paul Rainsberry, PhD; Joshua Tepper MD; Carl Whiteside, MD; Mark E. Whittaker, MD

CJRM 2000;5(1):21.

In developing the report, "Postgraduate education for rural family practice: vision and recommendations for the new millennium"^{1,2} the Working Group† felt it was important to illustrate rural family practice with a series of rural patient stories/physician management narratives.¹⁻³ These demonstrate the broad range of knowledge, skills and attitudes used by rural family physicians in responding to the needs of their patients. They provide examples of rural maternity care, mental health care, long-term pediatric genetic disease care and trauma care. They are based on real-life dramas from diverse rural locations across the country. Certain details of these patient stories/physician management narratives have been altered or based on composite examples to protect the identity of the individuals involved. The first on rural maternity care appears here.

Rural maternity care

Setting

A 20-bed hospital with anesthesia backup, but the GP surgeon is away. The nearest referral centre is 2 hours away by road and 45 minutes by air (total transfer arrangement time is 1.75 hours).

Patient's history

A 33-year-old woman, a one-pack-per-day smoker, gravida 3, para 1, aborta 1, presents at 41 weeks and 5 days' gestation with regular contractions. The contractions are strong and every 4 minutes, lasting 45 to 60 seconds each and have been ongoing for 2 hours.

Obstetrical history

Normal pregnancy to date. Dates are accurate and there have been no complications. There were

no complications in her prior delivery (stage 1 was 10 hours, stage 2 was 1.5 hours and stage 3 was normal with no postpartum hemorrhage).

Examination findings

Vertex presentation, 4 cm dilatation, a small bulge in the membranes, station -2. The baseline fetal heart beat was 125 beats/min, with good variability, no accelerations and occasional variables.

Decisions: The following decisions need to be made:

- Should she be kept in this setting or transferred (no cesarean-section backup)?
- Should she have an artificial rupture of membranes (ARM)?
- Should she be sent home?
- Should she have continuous or intermittent fetal monitoring?

Knowledge: The progress of labour, antenatal risk factors, monitoring fetal well-being in labour can be identified.

Skills: Pelvic examination, interpretation of fetal heart status, management of labour, ability to communicate with the patient.

Attitude: Awareness of surroundings and of limitations of the hospital setting with no cesarean-section backup; awareness of the principles of risk management in rural obstetrics.

Plan: Because of the woman's history of smoking, and because she is past her due date, the doctor recognizes the risks for possible placental post maturity. There are no other risk factors, so a decision is made to intermittently monitor with one-on-one nursing care (an extra nurse has to be called in). The doctor communicates well with the patient to make her aware that there is no cesarean-section backup and to give her the option of transfer at this time or to stay in the community and continue to labour. The doctor also offers the option of ARM. A decision is made for her to stay in hospital locally and not to do ARM at present, as the stage of labour is early.

Labour progresses slowly. She is at 5-cm dilatation 2.5 hours later. No late decelerations are noted with intermittent monitoring and the fetal heart baseline rate is 120 to 125 beats/min. The membranes are still intact.

Decision: The following decision must be made:

- Should her labour be augmented? If so, what is the best way to do this?

Knowledge: Active management of labour.

Skills: ARM.

Attitude: Risk management.

Plan: ARM is performed because of ease of manoeuvre, evidence to support is the same as the technique for augmentation, and because the doctor would like the labouring mother to be able to continue to walk.

When ARM is performed, meconium is noted. Continuous fetal monitoring is initiated because of concern about fetal well-being. The fetal heart demonstrates a baseline rate of 120 beats/min with variable decelerations, which are slow to recover.

Decisions: The following decisions are required:

- Should the patient be allowed to continue to labour in the present setting?
- Should another doctor be consulted?

Knowledge: Indicators of fetal well-being, and nonreassuring signs.

Skills: The ability to interpret the fetal heart tracing and possibly to do a fetal scalp pH.

Attitude: Clinical courage, knowledge of surroundings and local resources and awareness of transfer options and difficulties.

Plan: Another local doctor is consulted and asked to remain "on standby" for neonatal resuscitation if delivery occurs before transfer is arranged. Transfer to the referral centre is discussed with the ambulance base and consulting obstetrician. Weather conditions preclude air transfer. The decision is made to reassess progress in 30 minutes and if there is no progress, or if fetal well-being appears to be endangered, to transfer by road with a doctor in attendance. Thirty minutes later, the woman is 8 cm dilated, the fetal heart rate is 115 beats/min with variable decelerations with every contraction, with slow onset and slow recovery. The scalp pH is 7.23. A decision is made to keep her in the local hospital because of rapid progress since ARM. A second doctor is notified of the patient's progress thus far and of the pH results.

Fifteen minutes later, she is fully dilated with the urge to push.

Stage 2 is 40 minutes in duration with reasonable progress. Deep variable decelerations with slow recovery to a new baseline fetal heart rate of 90 beats/min.

Decisions: The following decisions are required:

- When should the second doctor be called in?
- Should a vacuum extraction be attempted?

Knowledge: A normal pattern of second-stage labour, fetal heart interpretation.

Skills: Operative delivery (vacuum or forceps), pudendal block.

Attitude: Clinical courage, commitment to optimize health of both baby and mother, and willingness to use local resources.

Plan: A second doctor is called to ensure neonatal resuscitation tools are in working order, and appropriate medications are drawn up. The decision to perform vacuum extraction is discussed with the second doctor and the decision is made to expedite delivery because of the observation of meconium, and deep variables of fetal heart beat with slow recovery and new baseline bradycardia. Vacuum extraction is performed with easy delivery and intact perineum. The neonate is suctioned on the perineum but is limp and does not cry upon delivery. The neonate is given to the second family doctor who uses a laryngoscope to view the cords and suction the oropharynx for a small amount of meconium. No meconium is visualized below the cords. With 100% oxygen and stimulation, the neonate breathes spontaneously, and the heart rate remains more than 100 beats/min.

Knowledge: Management of stage 2.

Skills: vacuum extraction, neonatal resuscitation.

Attitude: Cooperation of both doctors with one another, good communication between doctors and registered nurses and with the neonate's parents.

Decisions: Three decisions must be made:

- How can complications now be prevented for the mother?
- How can complications be prevented for the neonate?
- How can the health care team be debriefed after this delivery?

Knowledge: Prevention of complications in mother (i.e., with use of syntocinon at the time of delivery), appropriate management of stage 3, evidence for ophthalmic antibiotics, and vitamin K for the neonate.

Skills: Examination of the newborn, postpartum examination of vagina, perineum, etc.; ability to communicate with the health care team to debrief.

Attitude: The importance of prevention, recognition of the importance of communication with the health care team, dedication to the continuity of care for the new family.

Correspondence to: Dr. James Rourke (Chair), Director, Southwestern Ontario Rural Medicine Education, Research and Development Unit, 53 North St., Goderich ON N7A 2T5

This article has been peer reviewed.

*The Working Group for the report "Postgraduate education for rural family practice: vision and

recommendations for the new millennium" prepared for the College of Family Physicians of Canada

†A diverse group, comprising members of the College of Family Physicians of Canada (CFPC), the Society of Rural Physicians of Canada (SRPC), and a representative from the Royal College of Physicians and Surgeons of Canada. The group included practising physicians from rural and remote communities across Canada whose practice profiles included special skills and interests in such areas as anesthesia, obstetrics and emergency work. It includes physicians involved in teaching both students and residents for rural practice, family medicine residents, rural program coordinators, a postgraduate family medicine program director, and an associate dean of postgraduate medical education. The group was directed to review the current state of postgraduate education for rural practice in Canada and to outline an appropriate curriculum to prepare new family physicians for the challenges of rural practice. The report was endorsed by the SRPC in April 1999 and approved by the CFPC Board in May 1999.

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The occasional peripherally inserted central catheter



Fig. 1. Measure from the clavicular head to the third intercostal space.



Fig. 2. Place a tourniquet on the upper arm near the axilla. Prepare and drape in the usual manner.



Fig. 3. Perform the venipuncture, with or without local anesthetic.



Fig. 4. Remove the stiffening stylet from the PICC catheter



Fig. 5. Insert the connector into the catheter.



Fig. 6. Slide oversleeve up onto the connector and secure the catheter

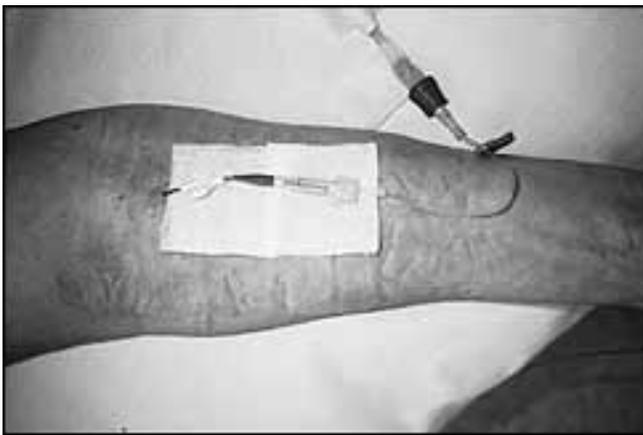


Fig. 7. Apply an injector cap. Suture or tape suture wing. Place a folded 2×2 gauze just below insertion site and cover with transparent dressing.

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Country cardiograms case 16: Answer

CJRM 2000;5(2):96

The first 5 complexes in the rhythm strip clearly are of sinus origin, with a rate of 73 beats/min followed by a premature ventricular complex. The next complex has a normal P wave, a short PR interval, and QRS morphology somewhere in between that of the sinus beats and the PVC. This is followed by another sinus beat. The remainder of the strip shows a series of 7 wide QRS complexes with a rate of 115 beats/min and with morphology similar to the initial PVC. Immediately preceding the first and fourth QRS complexes in this series are what look like P waves.

There is incontrovertible evidence here that this wide complex rhythm is ventricular in origin. Three clues are usually sought to reach such a conclusion: fusion beats, capture beats and dissociated P waves. Two of these, a fusion beat and dissociated P waves, are seen in this tracing.

The seventh complex has the classic features of a fusion beat: a short PR interval and a "hybrid" morphology. By definition, 1 of the 2 origins of this complex has to be ventricular.

Some P waves at the same rate as the initial sinus rate can be mapped out through the wide complex rhythm, in particular, immediately before the first and fourth complexes. If they had occurred fractionally sooner, they too may have produced fusion beats. Alone, these dissociated P waves allow a diagnosis of a ventricular rhythm with about 98% accuracy.

So what is the rhythm? In the early post-thrombolysis situation, one of the most common arrhythmias is accelerated idioventricular rhythm (AIVR). In some cases this may be a true escape rhythm, following upon failure of the sinus and junctional pacemakers. In other cases it may be a case of an overexcited ventricular pacemaker firing faster than a quite adequate sinus pacemaker.

The only problem in this case is that of the rate: 110 is the figure usually given for the top end of the range for AIVR. The fact that this particular rhythm soon slowed down to a rate of 99 per minute allows greater confidence in diagnosing AIVR here. (If the rate were still faster, "slow" ventricular tachycardia would have been a more precise conclusion.)

The advent of AIVR is usually noticed on the continuous monitor strip and it is unusual to see its onset so well documented in a 12-channel ECG. It often causes the treating physician some anxiety, but usually is harmless and of fairly short duration. The patient, not the monitor strip, needs the treatment.

Most often, AIVR does not require treatment and resolves spontaneously. If it is a true escape rhythm, trying to suppress it with medications obviously could be disastrous. If it is due to a "trigger-happy" ventricular pacemaker firing faster than the S-A node, the loss of "atrial kick" may occasionally be a problem in a very ill patient. In such a case, speeding up the sinus rate with atropine may be indicated.

This post-thrombolysis ECG, in addition to showing a return of the ST segments toward baseline, shows new Q waves in leads II, III and aVF, and increased height of the R waves in V1 and V2, substantiating the diagnosis of infero-posterior myocardial infarction.

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For the Question, see [page 85](#).

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