Early release, published at www.cmaj.ca on July 4, 2007. Subject to revision.

Afghanistan: Outside the comfort zone in a war zone

Early release. Published at www.cmaj.ca on July 4, 2007.

As might have been expected, it was the unfamiliar that first struck anesthesiologist and Canadian Forces Lieutenant-Commander Dr. John Macdonald: the extraordinary heat; the pervasive dust; the relentless rotor wash as he tried to sleep in his tent 150 m away from the Kandahar Airfield, where the helicopter pilots and soldiers train every night; the constant stream of casualties from penetrating trauma and blast injuries.

The exigencies of fate that came later were far more unexpected and ineffable: the Afghani soldier with significant vascular injuries who was allowed to die because treating him would drain the blood bank; the "humanitarian aid" cases turned away at the door because of the limited capacity of the makeshift, 11-bed plywood-framed military hospital, with an intensive care unit comprising just 3 beds. There was also the inexorable pressure to just "stabilize and move [patients] along," because beds had to be kept open in the event Coalition soldiers from Western nations needed treatment, knowing that Afghani patients were being transferred to a hospital in Khandahar that does not have the ability to mechanically ventilate to keep the patients alive and that their chances of survival were decidedly slim.

Performing trauma surgery in a war zone "certainly takes you outside your comfort zone," the 39-year-old Macdonald pensively noted during a break from his current duties while on a fellowship in critical care at the University of Ottawa.

A 15-year military veteran, Macdonald served with Canadian Forces Health Services at Joint Task Force Afghanistan's only Role 3 (tertiary care) multinational medical unit in the southeast quadrant of the troubled nation from mid-March until the end of May 2006 and is scheduled to return for another stint near the end of November.

Lieutenant Gordon Peckham

A casualty arrives in the resuscitation area at the Canadian-led NATO Role 3 Multinational Medical Unit at Khandahar Airfield. Military physicians say circumstances often place them in ethical quandaries, such as whether or not to discontinue treatment because of lack of resources.

The hospital's primary mission is to provide just enough emergency surgical treatment for Canadian, Dutch, American, Danish and British soldiers so that they can be packaged up within 24 hours and bustled off to a modern, fully equipped military hospital in Landstuhl, Germany.

But the makeshift facility also serves as the de facto tertiary care hospital for Afghani soldiers and policemen in the southeast quadrant who, simply put, have nowhere else to go when there's a threat to their "life, limb or eyesight." Khandahar's Mirwais Hospital, less than 10 km away and commonly known as Mirwise among Coalition forces, is altogether therapeutically limited, (see sidebar, page 134). While there is a tertiary care hospital in Kabul with broader diagnostic and surgical capabilities, there is no way to safely transfer injured Afghanis that far north.

The circumstances result in decisions that simply would not be made in Canada, Macdonald says, recalling the case of a 25-year-old Afghani soldier who arrived on the surgery table with extensive vascular bleeding. "I said to the surgeon, where are we going with this guy? His vessels were just all torn in the abdominal region, major vessels. This guy is not going to do well. We can either continue on for hours and hours and see what we can get to, or if you guys don't think this is going to be successful, let's not use all of our resources because there are a lot of conflicts going in the area."

"And so a decision was made to stop at that point. At the time, it was just a fairly analytical decision and it wasn't until after the fact that you start going, wow, the enormity of this. This guy, he was a healthy young guy. If he landed in our OR [operating room] here, we would go at him all day and all night and do everything and get him to the ICU [intensive care unit]. He may well then die of complications a few days after but still, you're not going to make that conscious decision in the operating room."

But such resource-based decisions appear to be the norm for military triage. In sketching the principles by which to make such decisions, *The Emergency War Surgery NATO Handbook* notes "the decision to commit scarce resources cannot be based on the current tactical/medical/logistical situation alone. One severely wounded, resource-consuming casualty may deplete available supplies, and thus prevent, less seriously injured casualties from receiving optimal care."

© 2007 Canadian Medical Association or its licensors

According to the handbook, other factors that should be weighed in decisions involving individual patients include time spent with an individual casualty, evacuation options, medical resupply schedules and space availability, as well as stress and exhaustion levels of medical staff.

Physicians who are new to battle arenas often grapple with the ethical implications of medical decisions based on war zone factors, says Lieutenant-Colonel Dr. Jacques Ricard, the current command surgeon for the Role 3 multinational medical unit, who also served 6 months as the on-site commanding officer for the unit after it was taken over from the Americans in January 2006.

"As a military physician, you are told from day one that, at some point, if you are deployed on an operation for Canadians, you will have to make decisions where you're going to say that somebody is a Pri-4 [priority 4] and you will not work on them at all because you are going to spend your energy and your resources on a Pri-2 or a Pri-1. You're supposed to be able to deny, if you like, treatment to serious casualties in your own forces."

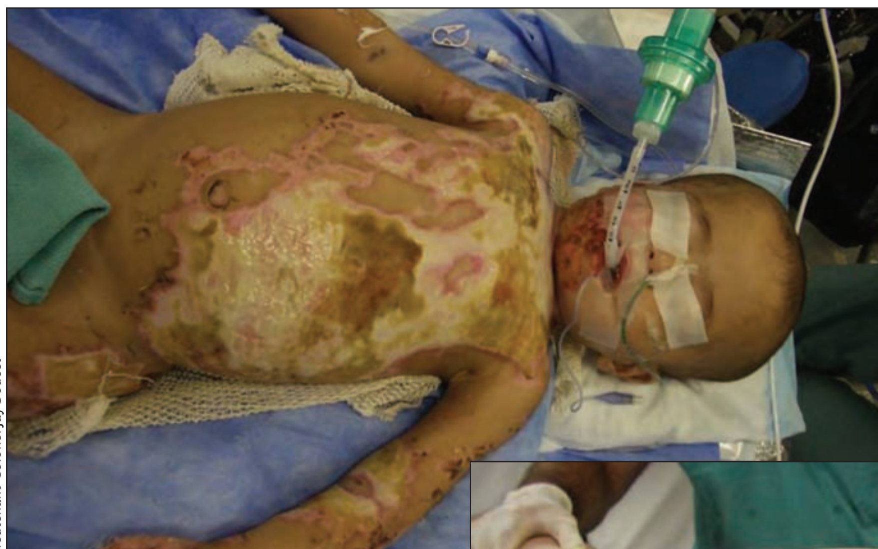
After 27 years of military service and 6 deployments, including 2 stints in Bosnia and 1 in Somalia, Ricard says that "when I go to a place like that, this is something that is engraved in my mind as to decisions that might have to be done. It's not a surprise for me to go there and say, 'Oh my God. This is not Canada. I didn't think it would be like this.' Or 'No, I can't do this. I have to accept everybody.' No. I go to Afghanistan, I try to help Afghanistan. I come back to Canada, I'm in a different system. I can make the switch very easily. Some people don't though."

Macdonald says the notion of providing a different standard of care for Afghanis than for other Coalition soldiers was entirely unsettling and a constant topic of debate amongst the Canadian medical team. "I don't think you ever get your head around it. We'd just, literally, go for a run and discuss it. We wouldn't come to any resolution. That's just the reality there."

University of Toronto Sunnybrook Health Sciences Centre trauma surgeon Major Dr. Homer Tien says the medical teams invariably face problematic cases because of limited resources at the military hospital, such as the inability to

Map by www.af.mil, photo by Lieutenant-Colonel Jay Doucet

The Role 3 Multinational Medical Unit in southeast Afghanistan offers treatment in a makeshift, plywood-framed facility that, ironically, is far better equipped than Khandahar's Mirwais Hospital, which lacks even a mechanical ventilator (see sidebar, page 134).



Lieutenant-Colonel Jay Doucet

A 2-year-old Afghan girl with scald injuries on 27% of her body surface is treated. Staff often have Afghani civilians dumped on their doorstep, which exacerbates pressure to save beds and medical resources for injured Coalition forces.

Lieutenant-Colonel Jay Doucet

A US Air Force airman is treated after being struck by a fragment from a Taliban rocket attack just 300 m from the multinational medical unit. Its 2 surgical teams often perform as many as 3 or 4 major operations daily.

deliver intravenous food, or limited surgical capabilities at Mirwais.

Staff also face constant pressure to keep beds open, Tien says, recalling a case of a 15-year-old girl who had been shot in the neck and needed a tracheostomy. She tied up a bed "for 7 days or more as we were trying to wean her off the mechanical ventilation. Certainly, you're very cognizant all the time that you only have very limited ventilatory capacity and she was occupying that space."

Macdonald says the medical staff is invariably caught between the conflicting demands of limited resources and high patient volume, often having to turn away civilian casualties who have basically been dumped on the doorstep. "In the second week that I was there, maybe 20% of our patient population was humanitarian. But then, as the conflict increased and our casualties increased, we had to turn them away because we had to maintain surge capacity. There was always pressure to have empty beds because that's what we were there for."

The space pressures invariably affect the treatment of Afghani soldiers and police, Macdonald adds. "Because all of the Western nation troops could go to Landstuhl and the Afghanis couldn't, then all of a sudden, there are 2 different standards of care. And that's where the difficulty comes."

Macdonald recalls the case of a young Afghani soldier who had been shot under the armpit and arrived coughing up blood. He was taken to the operating room and stabilized but then was intubated for 14 days and began to show the typical markers of infection. But the unit lacked adequate microbiology capabilities, presenting an enormous clinical challenge in trying to match a suitable antibiotic. "Then the ethical component comes in because every day the administrators are saying to us, 'What are you doing? Why aren't you getting this guy out? We need the bed.'"

The lack of capacity to maintain Afghani patients on a ventilator for extended periods of time was often problematic, Macdonald adds. "These patients would be taken off the ventilator and transferred to Mirwais, where they would die." In other instances, some therapeutic interventions weren't pursued because it was clear Mirwais was not capable of performing the requisite follow-up measures. "It puts you in a position of asking yourself: I have it and I can institute it but to what end? I can't carry this out here and the patient is going to go somewhere they can't carry it out. So what do I do now?"

"We hadn't been faced with these kind of ethical dilemnas before," Macdonald adds. "So, for all of us, it was new. We hadn't talked about it as a group. None of us knew that these would be issues. I've done humanitarian aid in other countries. I've worked in Nepal, for example. And that's pretty easy, because if you don't have it, you can't use it. That's completely different."

As commanding officer for the unit, Ricard was constantly walking the recommended line on surge capacity, often having as many as 80%–90% of the beds filled with Afghanis, rather than keeping 50% of the beds open at all times as a contingency against a massive round of casualties.

On occasion, that meant treating an

Afghani patient for as long as 35 days, Ricard says. "It's pointless to simply save a life and then the next morning, say whatever happens to this person, happens to this person. You want to take them to a hospital where they don't have an ICU and this person is still intubated? [Yet keeping that person] occupies a bed, a nurse, 2 nurses, 3 nurses. That was the main challenge, space itself, not really what we could, what we couldn't do, with the equipment, the different specialties and all that stuff. The challenge is the bed space. But you cannot be shy when it's time to actually make room. That's the approach I took. I didn't want to have beds that were empty ... and say no to people that we could actually save. So I filled them up and I lived with it. Sometimes, your team has different opinions. You can be burning out your personnel, so it's a difficult choice."

At times, though, fate and circumstance exact their toll, Ricard adds, recalling a case in which an intubated, partially paralyzed 7-year-old child with a piece of grenade shrapnel embedded in his brain had to be transferred to Mirwais, where he subsequently died.

"You know that he doesn't have a future in a country where something like rehab doesn't exist and he stays paralyzed. So, in a certain sense, if you send the person to Mirwais and it doesn't go well, you know at least you did the most that you could do to assess and to save a life and then you have to move on. You cannot keep these people forever. Those are the cases where you have to say okay, well we tried to save them and then whatever happens now is going to have to happen within their own system."

"It's tough. But those decisions have to be made. It's impossible to have a 15-bed hospital that is covering a city the size of Toronto."

Mirwais officials didn't hesitate to pick up the child, or other Afghani patients, even when they know they lack surgical capability and that the prognosis is dismal, Ricard adds. "That was the reaction of some of their doctors, to say: 'Don't try to protect us against ourselves. We want to be involved in taking care of our own patients.'" — Wayne Kondro, *CMAJ*

DOI:10.1503/cmaj.070838

Malaise at Mirwais

Early release. Published at www.cmaj.ca on July 4, 2007.

For the seriously ill, being treated at Khandahar's Mirwais Hospital is all but a death sentence, says an ex-Vancouver paramedic who now serves as country director for a non-governmental organization operating in Afghanistan.

"The idea of calling it a hospital is outrageous," says Edward McCormick, country director for the Afghanistan office of Senlis Council, the Paris-based international development and security policy think tank.

McCormick, who earlier this year crafted a report entitled *War zone hospitals in Afghanistan: a symbol of wilful neglect*, says conditions are so bad at Mirwais that it is little more than a means of getting patients "out of the wind."

Canadian military physicians often find themselves in ethical quandaries about transferring Afghani soldiers, policemen and civilians to Mirwais after treating their trauma injuries at a multinational medical unit (see page 131).

They're justified in their concern, McCormick says. Mirwais isn't just "poorly equipped. It's not equipped." The hospital, built in the early 1970s, now serves a population of nearly 3 million people. With 450 beds, that translates into a 0.15 bed per thousand ratio, compared with an Organization for Economic Co-operation and Development average of 4.1.

"There's only one working X-ray. The room called the ICU [intensive care unit] is a big open ward with more beds than there should be, with no precautions taken in terms of isolation," McCormick notes. "There is no suction equipment. There is no monitoring equipment. There are no ventilators and they don't have any resuscitation equipment. They have one BVM [a hand-held resuscitation device/ambu bag]; it's locked in a cupboard. There's no laryngoscope. There is no McGill forceps. [The latter 2 devices are used to clear obstructed air passages.] When I asked them about cardiac arrest response, they said 'That just means there's an empty bed.'"

"The only little bit of blood they get is from family members of patients. There's no blood bank, per se."

The hospital's lab "looked like a museum from something around Dr. [Norman] Bethune's time. They had really old Erlenmeyer flasks up on a bench. It looked more like a prop from a movie studio."

Nor does Mirwais have central heating, air conditioning or laundry services. "The place is filthy. There's dead flies literally piled up on the window sills and floors," McCormick says. In the pediatric ward, "the smell of urine is really apparent."

"It looks like an intertidal zone with children being incontinent in beds. On one occasion, I saw a child with polio and [staff] were waiting for lab results to come back from Pakistan, while this kid was in an open ward. It's worse than a place to house people. It's a vector for infection."

McCormick's report paints a dismal picture of virtually every facet of hospital operations. There is no record-keeping. Oxygen tanks are corroded and at risk of exploding. There is no pharmacy; if a doctor prescribes a medicine, the patient's family must hunt for it in the city. Doctors are paid an average US$50 per month, while nurses earn US$35. Both require that patients provide a "gift" to receive attention.

McCormick also argues that the state of Mirwais is an indictment of international reconstruction efforts, including the $139 million the Canadian International Development Agency has spent in the war-torn country. "We haven't seen any sign of that spending anywhere" and particularly, within the hospital system. — Wayne Kondro, *CMAJ*

DOI:10.1503/cmaj.070852