

Death by restraint

Donald Milliken, MD

The article by Dr. Michael S. Pollanen and colleagues in this issue (page 1603) on the unexpected death of young adults in association with restraint is the latest contribution to a discussion that began in the early 1980s on the risk of death associated with physical restraint. In health care institutions, the use of restraints for elderly patients is well recognized as a potentially dangerous practice. Deaths have been reported with the use of vest-type restraints and bed rails, and the use of restraints in institutions has become more and more circumscribed as their hazards have become known.^{1,2} Pollanen and colleagues identify similar concerns with respect to the use of positional restraint procedures to subdue physically healthy adults.

Published reports describe deaths in young people who were “hobbled” or “hog-tied” in a prone position; this often — but not exclusively — has involved restraint imposed by police officers in emergency situations.³⁻⁵ The deaths occurred in association with the use of choke holds or restraint in the prone position, often with chest compression by the body weight of the person imposing the restraint. Chest compression has been postulated as a cause of death of women during consensual sexual intercourse.⁶ In 19th-century Edinburgh, chest compression of intoxicated or fragile victims was the technique used by Burke and Hare in their notorious quest for apparently undamaged specimens for anatomic dissection and demonstrations.

In most published reports the precise cause of death was unclear. In some cases, intoxication with cocaine or other narcotics was reported. In 2 others, the patient was undergoing cardiac monitoring at the time of death. One of these patients, aged 85 years, had fatal ventricular tachycardia while an intravenous catheter was being inserted;⁵ the other, aged 35, became asystolic while being monitored by paramedics during transport to hospital.³

In normal volunteers the use of positional restraint has been found to produce differing effects on cardiac and respiratory function, ranging from a minimal impact to substantial impairment.^{7,8} However, the population described by Pollanen and colleagues is not a normal one. All of the cases selected for review involved people who suffered from “excited delirium,” presumed in all but one case to be a result of either intoxication or psychiatric illness. This clinical picture is in keeping with reports that people referred by the police to psychiatric emergency services are more likely to require restraint than those referred from other sources.^{9,10} In Pollanen and colleagues’ review, 4 of the 12 patients with psychiatric illnesses had also been subdued with pepper spray.

There is no information on whether similar deaths have occurred in nonpsychiatric patients or in those who required restraint because of violent behaviour associated with alcohol or other sedative intoxicants. The latter group may be especially at risk. Because only deaths are reported in the literature, we do not know how many people have suffered nonfatal injury that necessitated their resuscitation in emergency departments. A study examining a consecutive series of situations in which restraint is used is needed to determine the frequency and type of injuries that actually occur. Is there any particular method of restraint that is less dangerous than others? Some authors suggest that maintaining the restrained person in an upright position may pose less of a challenge to the cardiorespiratory system.⁸

In emergency situations involving extremely agitated people, physical restraint



Editorial

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Dr. Milliken is Chief of the Department of Psychiatry, Capital Health Region, Victoria, BC.

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can still have a legitimate place. Without restraint, some of these people will harm or even kill themselves or others. However, restraint is not itself harmless; some proportion of those who are restrained may die. We do not know what this proportion is, or how many others will come near death and need to be revived. As clinicians we need to accept that restraint procedures are potentially lethal and to be judicious in their use. Physical restraint is not always a harmless alternative to sedation with drugs.

Physical restraint should be used only when the situation clearly justifies it and when there is no other way to prevent physical harm to the patient or to others. There should be greater awareness of the risks of restraint, and protocols should be put in place to minimize those risks. Sometimes it is better to wait things out than to intervene. The use of pepper spray and stun guns should be minimized. These are not tranquilizers or restraints, but rather disabling devices that work by producing an adverse physical effect. In people whose condition is compromised by drugs, this effect can be unpredictable.

In cases of psychiatric illness, the use of a seclusion room may be less confrontational and cause less stress to the patient. Anyone who is restrained, whether in hospital or in the community, should be under constant observation by someone assigned exclusively to this task.¹¹⁻¹³ The time spent under restraint should be minimized; for some methods and situations, 5 minutes may be sufficient.⁴ Successfully placing the person in restraint is not an end in itself, but rather the first step in a process of calming the person and resolving the situation. Appropriate techniques for restraint that minimize the use of chest compression and the prone position and that maintain an open airway should be standardized.

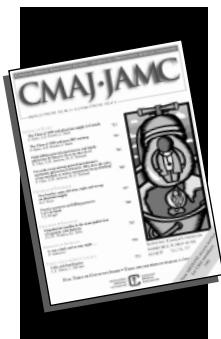
Although programs can be established inside the hospital setting to minimize the use of restraint, the emergency situations in which police find themselves need a very different set of guidelines. It may be that society

cannot avoid the risks of necessary restraint, just as the risks of high-speed car chases cannot be avoided completely. Guidelines about what to do, when to do it, and how and why to do it need to be well understood to ensure that physical restraint is applied only when necessary and in the most appropriate manner possible.

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Reprint requests to: Dr. Donald Milliken, Department of Psychiatry, Capital Health Region, 1900 Fort St, Victoria BC V8R 1J8; fax 250 370-8274; dmilliken@caphealth.org



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