Procedures for a Risk of a Bioterrorism Attack

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"See where the green grass grows again, and a blade of grass is for each of you."

The Heavy Rucksack by Giulio Bedeschi

The 20th Century can be considered the "era" for developments in chemical weapons and weapons of mass destruction. The common 4th Century practice of using poisoned arrows dipped in decomposing bodies now might seem a little old-fashioned. Between 1960 and 1999, the Monterey Database registered that there has been 121 terrorist attacks using biological and chemical warfare. During the last decade, the risk of a possible attack involving a huge number of people, especially defenseless civilians in countries not involved in war, has reached an all-time high.

It is evident that there is a demand for territorial and hospital emergency units to be ready with plans and treatments in the event of a massive influx of victims. Managing these plans means determining the extent of the emergency and any peculiar clinical characteristics of the victims (premature diagnoses, characteristics of the biological agents used, procedures required for decontamination, ways of protecting personnel, and specific antidotes).

The health workers in the emergency system, along with the assistance of the other emergency services, represent the first line of defense against these types of attacks, and often only are evident after the arrival of thousands of sick people.

It is vitally important that the staff is effectively trained and acknowledges the treatment needed for the consequences of exposure to biological agents, chemicals, and nuclear waste. Above all, to provide an effective and comprehensive response, there must be unified collaboration between the emergency services staff and anti-poison centers and/or nuclear, biological, and chemical (NBC) forces.

These should be a four-phased protocol to manage the risk of an attack: (1) reduce risk; (2) preparation; (3) response; and (4) recovery.

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Lessons from a Terrorist Attack in Tel-Aviv Market: Putting All of the Golden Eggs in One Basket Might Save Lives

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Introduction: On 01 November 2004, a suicide bomber detonated an explosive device in a crowded, open, market area in Tel Aviv. The bomb exploded only six minutes away from a large, Level-A, trauma hospital and six minutes away from a Level-B hospital. Seven of the eight "immediate" victims were transported to the near-by Level-A trauma center. Only one victim was taken to the Level-B center. No immediate victim was evacuated to the two other Level-A trauma centers in the region (20–30 minutes away).
Objective: To examine the risks and benefits of this method of triage in a small-scale, mass-casualty incident (MCI).
Methods: Home Front Command (HFC) officers arrived at both hospitals on 01 November, and watched patient treatment in the emergency room (ER). The officers also attended a debriefing at the trauma center immediately after the event, and a second session, one month later. The time of arrival of the wounded patients to the hospital, the need of immediate life-saving procedures (intubation, urgent life-saving or disability-preventing operation) done on arrival of the patients to the hospital, and the need for secondary evacuation all were examined.
Results: The injured patients were evacuated using the "scoop and run" method and arrived at the hospital within minutes. Reviewing the ER work by videotape recording of the triage site and the ER found no bottlenecks either outside or inside the ER. All seven immediate victims were treated simultaneously at the emergency room. Two casualties arrived with bag-valve-mask ventilation and needed urgent intubation. Two urgent laparectomies and two orthopedic operations were done. The immediate victim who was referred to the smaller, near-by hospital needed secondary evacuation to a neurosurgical center.
Discussion: The decision to do primary triage and send most of the severely injured patients to the nearest Level-A trauma center, using a "scoop and run" mode of evacuation, was life saving in this event. Life-saving procedures and urgent operations were done immediately on arrival.
Conclusions: When an MCI occurs in an urban space, most of the severely injured casualties should be evacuated to the nearest Level-A trauma center in order to enhance the completion of definitive treatment. Evacuation of immediate casualties to more distant Level-A hospitals might delay administration of life-saving procedures and, therefore, should be avoided in a small-scale event.

Keywords: bag-valve-mask ventilation; emergency room; intubation; mass-casualty incident; scoop and run; surgery; triage; transport; trauma center
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