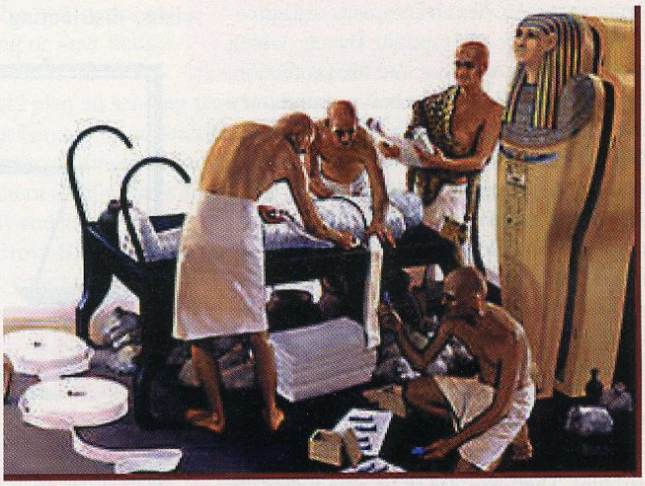
ALL TIED UP

The Use of Restraints by EMS Personnel - A Case in Point



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It was precisely 1800 hours when one of L.A. City's finest responded to a reported seizure on February 4, 1991. The rescue ambulance zigzagged through traffic headed for the West Los Angeles address. Moments later, they would encounter a 36-year-old male who would later be the subject of a major lawsuit, not to mention a sobering wake-up call on the issue of the application of restraints.

The family reported to paramedics that what appeared to be a grand mal seizure had occurred prior to their arrival. The patient was flailing around on the floor, would not respond verbally, had an altered mental status, and had vomited more than once.

Both paramedics and their engine company support had their hands full in attempting to control the patient's combative behavior. As it would turn out, the body building equipment in the room was telltale to the incredible strength that their patient was to exhibit.

The quick thinking paramedics, realizing that the patient needed to be carried down a narrow stairway, safely, decided to place their patient on a flat and utilized cloth bandages to secure the hands. They were shocked to observe their patient tear through the tape in an instant a chilling feeling considering his muscular physique and size. The patient was finally placed face down on the flat with his wrists and ankles secured with a ladder strap in addition to the safety straps on the flat. The patient was re-assessed and found to be breathing freely and was in an acceptable position should suction be necessary for airway control.

With the assistance of the firefighters on the engine company, the patient was carried carefully down the flight of stairs and into the rescue ambulance. Although, no additional seizure activity was noted, their patient continued to display incredible strength as he flailed around on the gurney.

A little history

It was May 2, 1984, that a Memorandum of Agreement between the Los Angeles Fire Department and Police Departments was signed. The purpose of the Agreement, which carried the signatures of the Fire and Police Chiefs dealt with a policy for requesting ambulance transportation for a person who exhibited signs/ symptoms of being under the influence of Phencyclidine (PCP), and who appeared to be in need of immediate medical treatment. The Memorandum delineated the responsibilities of each agency regarding the transportation of persons under the influence of PCP. It was recognized that persons under PCP influence were both a medical as well as law enforcement problem. Such persons, the Memorandum stated, may be at high risk of sudden death caused by a variety of medical ailments, including cardiac arrest.

Police officers were directed to request a rescue ambulance to transport arrestees who exhibited objective symptoms such as: unconsciousness, muscle rigidity, high temperature, are combative, argumentative, or may become violent.

It was noted in the Agreement that it was in the best interest of patient care and reduced City liability if persons were transported by ambulance to the closest basic emergency hospital.

The program was Citywide and encompassed

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all LAPD geographical areas and all Fire Department stations.

The officers were to restrain the arrestee face down by handcuffing the arrestee's hands behind the back in a manner prescribed for restraining persons suspected of being under the influence of PCP. The arrestee's feet would be cord-cuffed and the officers would place the arrestee face down onto the rescue ambulance's flat stretcher. Once the arrestee had been restrained, officers assisted the paramedics in securing the arrestee on the flat to the gurney, as well as loading the gurney into the rescue ambulance.

At least one officer would ride with LAFD personnel in the patient's compartment of the rescue ambulance. The officer's partner or a back-up officer would follow the rescue ambulance to the hospital.

After being fully restrained, the arrestee/patient was medically assessed by the paramedics, which included cardiac monitoring, base hospital contact, IV if possible, etc.

Patient destination was determined to be consistent with the establish transportation policy. That is to say, the patient would normally be transported to the most accessible basic emergency hospital for medical treatment. In the event of any kind of dispute between paramedics and police officers and/or hospital personnel, the Police Department agreed that the decision of an LA Fire Department EMS Supervisor would be final regarding transportation dispute.

After securing their patient, paramedics began transport to the hospital. Approximately 30 seconds from the hospital, the patient who had been continuously monitored, suddenly stopped flailing around and became apneic. Restraints were hastily removed, the patient was placed in a supine position and immediate resuscitation was initiated. No seizure activity was noted prior to the arrest.

The patient was suctioned out with minimal vomitus or fluids noted, and was rushed into the emergency department where resuscitation efforts continued, but were futile; he did not regain consciousness. Paramedics remained in the emergency department and assisted hospital personnel for 30 minutes. It is noteworthy that emergency room personnel, including the on-duty physician, were convinced that the paramedic's actions were appropriate and consistent with established protocols.

Additional history on the patient obtained following the lawsuit included that the patient had a head injury at the age of 13 when struck while on a bicycle. He had seizure activity since that time, and was on Dilantin.

In the emergency department, examination revealed that the patient was cyanotic. Intubation was initiated, and the patient was administered Epinephrine and Atropine, but remained asystolic. Additional Atropine and Epinephrine was administered, and in about five minutes the patient developed electrical impulses without pulses. Cardiopulmonary resuscitation was continued, and resulted in a weak, thready pulse several minutes later. The heart rate was approximately 150. Over the next 30 minutes, the blood pressure improved to 110/70; arterial blood gasses revealed the Ph was 6.7, PO2 was greater than 200.

After nearly an hour, the patient improved somewhat. He remained tachycardiac at 140, pupils were mid-positioned and reactive and was exhibiting peripheral tremor for which he received Decadron 10mg/IV.

He was the admitted to the Intensive Care Unit with the following diagnosis:

1. Cardiopulmonary arrest on the basis of hypoxia and aspiration.

2. Seizure disorder.

3. Aspiration with adult respiratory distress syndrome appearance.

In the record, it was stated that the chest x-ray revealed an ARDS pattern.

The treatment plan called for ventilator support; seizure activity was to be controlled, and antibiotics were given intravenously as was Dilantin.

A neurological consultation was done the following day. The patient was on a respirator, deeply comatose with myoclonic jerking of the face and upper and lower extremities. There was no response to light by the pupils, and no grimacing to painful facial stimulation: the impression of the neurologist was that of severe anoxic encephalopathy with myoclonic status. A second opinion neurologically the following day reiterated the first examination. A CT scan of the brain revealed some asymmetry, and a subarachnoid hemorrhage. An EEG taken was severely abnormal.

The patient's death occurred a week later. Ultimately EEG's taken showed brain death; a CT scan showed diffuse subarachnoid hemorrhage. At the family's request, respiratory support was discontinued and the patient declared dead. A drug screen was negative for illicit drugs.

In summary, the patient apparently had a seizure and paramedics were called. It is possible that the patient initially had a subarachnoid hemorrhage and then a seizure. He was quite combative and uncooperative upon arrival of fire department personnel. As the patient arrived at the hospital, he arrested. Despite heroic efforts by paramedics and emergency room personnel, the patient never regained consciousness, failed to improve and eventually died seven days later.

In March 1994, a recommendation for settlement to the Los Angeles' City Council was made by the office of the city attorney. It requested that an appropriation be made to the City's Liability Claims Account to pay $333,334.00 in the settlement made payable to the family of the patient who died over three years earlier.

In the lawsuit, the plaintiffs contended that the paramedics were grossly negligent for "hogtying" their son and transporting him to the hospital on his stomach.

An autopsy failed to determine the cause of death. However, it was determined that the manner in which the death occurred is consistent with the manner in which the patient was restrained and his position during transport.

At various depositions, numerous physicians testified, some in complete and total opposition. Several physicians indicated that there was no wrongdoing on the part of the paramedics, others implying there was.

One physician likened the paramedics' activities with a homicide.

The Los Angeles City Fire Department has since revised its procedures for the transport of restrained patients; this is a result of medical evidence suggesting that the use of the cord-cuff leg restrainer on persons with certain pre-existing medical conditions can result in serious injury or death. Additionally, studies in medical literature identify the cause of deaths in some patients as "positional asphyxia." Several cases have been described in the literature that occurred while patients were in a prone position and in rear compartments of police vehicles while in custody.

The following changes were put into effect:

All patients placed in a rescue ambulance who are restrained by the Police Department using a cord-cuff leg restrainer and/or handcuffed in conjunction with a cord-cuff restrainer shall:

1. Be immediately placed in the left lateral position.

2. Not be allowed to roll into a "face/chest" downward position (prone).

3. Be continuously monitored by the lead paramedic when he/she is restrained in this manner until released by appropriate hospital personnel.

It is the Los Angeles Police Department's policy to use the cord-cuff leg restrainer for the least amount of time necessary to control violent or combative persons.

An EMS Captain shall be requested for any disputes or on-scene situations that arise where field personnel require clarification of this policy. A district captain's decision regarding this issue is final.

The application of patient restraint remains controversial. Up until February 1995 no formal restraint policy or procedure existed in Los Angeles.

At the time a review of five years of police custody deaths in Los Angeles County in early 1993 found that restraint tactics were cited as a contributing cause in just five cases. However, in nine months following that period, hogtying or its effects were cited as a contributing factor in at least four deaths.

The first direct relationship between "hogtying" and sudden death syndrome, while in police custody, were made in 1992 by a Seattle Coroner, Donald Reay. Ventura County Coroner Ronald O'Halloran published an additional study that suggested that it would be "both humane and prudent to develop safer means of

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control and protection."

The Los Angeles Police and Fire Departments revised their policies after reviewing medical studies identifying the possible dangers; the new policy requires that suspects/patients be placed in the left lateral position. Various EMS committees had been wrestling with an acceptable procedure in Los Angeles County. Numerous meetings had been held to discuss this issue, and while it was evident that there were disagreements among police agencies and fire departments, resolution was inevitable. (The guidelines on this page were adopted in Los Angeles County in 1995.

Epilogue

In mid-December 1994, a meeting was held at the Fire Department's Bureau of Emergency Medical Services with the local Emergency Medical Services Medical Director to review the Superior Court case. Also, present were the involved paramedics, as the Department of Health Services desired to interview both paramedics prior to concluding its inquiry into this incident.

It was determined after careful review that there was no wrongdoing on the part of the paramedics. Both did what was appropriate at the time and as a result, the case has been closed.

In conclusion, restraints can save your patient's life and may save yours. If your agency/county does not have a clear policy or procedure on the use of restraints, it is suggested that you recommend one. The guidelines presented here (Draft Reference No. 838) are the result of a tremendous amount of work by various committee members working with the Los Angeles County EMS Agency. It is hoped that they will be helpful to you. Be careful out there!

References

1. Document, Reference No. 838, "Application of Patient Restraints," Department of Health Services, January 1995.
2. Rhoades, J., "Restraint Restrictions," Emergency Medical Services, Vol. 22, No. 1, January 1993

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Guidelines for patient restraints

The Los Angeles City Fire Department supported countywide guidelines on the application of patient restraints. The following guidelines became effective on February 15, 1995 in Los Angeles County:

Purpose: To provide guidelines on the use of restraints in the field or during transport for patients who are violent or potentially violent, or who may harm self or others.

Authority: California Code of Regulations, Title 22 Sections 1000075 and 1000159; Welfare and Institutions Code 5150; California Admin. Code, Title 13, Section 1103.2;

Health and Safety Code, Section 1798.6.

Principles:

1. The safety of the patient, community and responding personnel is of paramount concern when following this policy.

2. Restraints are to be used only when necessary in situations where the patient is potentially violent and is exhibiting behavior that is dangerous to self or others.

3. Pre-hospital personnel must consider that aggressive or violent behavior may be a symptom of medical conditions such as head trauma, alcohol, drug related problems, metabolic disorders, stress and psychiatric disorders. Base contact criteria shall be strictly adhered to for those conditions that require it.

4. The responsibility for patient health care management rests with the highest medical authority on scene. Therefore, pre-hospital personnel shall determine medical intervention and patient destination. Authority for scene management shall be vested in law enforcement.

5. The method of restraint used shall allow for adequate monitoring of vital signs and shall not restrict the ability to protect the patient's airway or compromise neurological or vascular status.

6. Restraints applied by law enforcement require the officer to remain available at the scene or during transport to remove or adjust the restraints for patient safety.

7. This policy is not intended to negate the need for law enforcement personnel to use appropriate restraint equipment that is approved by their respective agency to establish scene management control.

Procedures: The following procedures should guide pre-hospital personnel in the application of restraints and the monitoring of a restrained patient:

1. Restraint equipment applied by pre-hospital personnel must be either padded leather restraints or soft restraints (i.e. posey, Velcro, or seatbelt type). Both methods must allow for quick release.

2. The application of any of the following forms of restraint shall not be used by EMS pre-hospital care personnel:

a. Hard plastic ties or any restraint devise requiring a key to remove.

b. "Sandwiching" patients between backboards, scoop-stretchers, or flat, as a restraint.

c. Restraining a patient's hands and feet behind the patient (i.e. "hogtying").

d. Methods or other materials applied in a manner that could cause vascular or neurological compromise.

3. Restraint equipment applied by law enforcement (handcuffs, plastic ties, or "hobble" restraints) must provide sufficient slack in the restraint device to allow the patient to straighten the abdomen and chest to take full tidal volume breaths.

4. Restraint devices applied by law enforcement require the officer's continued presence to ensure patient and scene management safety. The officer should if at all possible accompany the patient in the ambulance, or follow by driving in tandem with the ambulance on a predetermined route. A method to alert the officer of any problems that may develop during transport should be discussed prior to leaving the scene.

5. Patients shall not be transported in a prone position. Pre-hospital personnel must ensure that the patient's position does not compromise the patient's respiratory/circulatory systems, or does not preclude any necessary medical intervention to protect the patient's airway should vomiting occur.

6. Restrained extremities should be evaluated for pulse quality, capillary refill, color, nerve and motor function every 15 minutes. It is recognized that the evaluation of nerve and motor status requires patient cooperation, and thus may be difficult or impossible to monitor.

7. Restrained patients shall be transported to the most accessible basic emergency department facility within the guidelines of Ref. No. 502, (LA County) Patient destination. Allowable exceptions:

a. A 5150 order written by a designated Psychiatric Mobile Response Team, when direct admission to a psychiatric facility has been arranged.

b. A peace officer request for transport to medical facilities other than the closest may be honored with base hospital concurrence.

Documentation: Documentation on the EMS Report form shall include:

1. The reasons restraints were needed.

2. Which agency applied the restraints (i.e. EMS/Law enforcement)

3. Information and data regarding the monitoring of circulation to the restrained extremities.

4. Information and data regarding the monitoring of respiratory status while restrained.