COMBAT MEDIC LESSONS LEARNED

Medics, Corpsmen, and Pararescuemen are invited to meetings of the Committee on Tactical Combat Casualty Care to present casualty care vignettes from their recent deployments. The following are their lessons learned, observations, opinions and comments extracted from those presentations.

090203 Combat Casualty Scenario **HM1 Jeremy Torrisi**

HM1 Torrisi presented a multi-casualty scenario from Afghanistan in which he was the Corpsman on scene. He was also wounded in this firefight. He was subsequently selected as the Marine Corps Special Operations Command Corpsman of the Year for his actions in this engagement, during which he treated 15 casualties, saving all but one.

HM1 Torrisi's lessons learned:

Self-aid and buddy-aid are crucial. Rapid SA/BA application of tourniquets saved at least three lives in this one scenario.

TCCC must remain flexible – the tactical situation will pose unexpected problems.

Needle decompression for tension pneumothorax can be done repeatedly - one casualty received multiple decompressions with 14-gauge needles in a 3-hour period and survived.

Refresher training in TCCC SA/BA is crucial, especially with tourniquets.

Medics do get wounded and the casualty plan must factor this in.

Treatment during Care Under Fire may be very difficult when the available cover is minimal and very crowded.

TCCC should emphasize reinforcing chest seals.

Do not withhold adequate analgesia based upon the casualty's desire to stay in the fight.

Take care of indigenous force allies.

090428 Combat Casualty Scenario **SFC Eric Strand**

SFC Strand presented a multiple casualty scenario from April, 2008 in eastern Iraq in which a Special Forces unit suffered six wounded and one killed in action. All of the casualties had injuries from gunshot wounds and/or shrapnel.

SFC Strand's lessons learned:

Mission personnel were dehydrated and fatigued at the time of the engagement.

There were not enough hypothermia kits - blankets were cut in half to be able to treat all the casualties.

Weather issues caused problems with CASEVAC and close air support.

The second 18D medic in the unit was severely wounded.

Keep medical treatment of injuries as simple as possible.

The team encountered an IED after the main engagement -***the fight is never over***.

Be ready to move the Casualty Collection Point quickly if needed.

Reinforce Casualty Collection Point procedures in training.

A casualty event is a tactical event and team members need to train for all aspects of casualty response.

Re-pack and re-check aid bags monthly and prior to missions to make sure you know where everything is and that the bag is completely stocked.

Cross-train others in the unit in TCCC so that they can assist with casualty management.

Clean up the Casualty Collection Point before leaving to deny hostile forces casualty estimates and other information.

All of the WIAs were eventually returned to duty.

090804 Combat Casualty Scenario **SSG Peter Biggane**

SSG Biggane presented a recent casualty scenario from the Philippines where both a Filipino citizen and a member of the Abu Sayyaf were injured. The two casualties (ages 16 & 17) were brought to a local hospital, which had been locked and vacated due to mortar attack threats. The team sergeant and SSG Biggane, both trained in TCCC, treated the casualties.

SSG Biggane's lessons learned:

Consider other fluid choices and do not be too aggressive with fluid infusion if the casualty has active hemorrhage.

Inspect prior treatments. The IV started by the host nation medic was not patent.

Available oxygen was depleted after 90 minutes.

Better cross training in shock recognition is needed.

All team members should be able to take and record vital signs as well as to provide medical care to several patients in one casualty scenario if required.

Civilians and foreign counterparts were not effectively controlled and interfered with treatment at times. The media was allowed into the treatment area without the medic's being aware.

091103 Combat Casualty Scenario **SSG Jake Brown**

SSG Brown deployed to Afghanistan with the 20th Special Forces Group in 2008. His Special Forces unit was operating near a suspected Taliban stronghold (altitude 6500 ft) when one of the team members sustained a gunshot wound to the buttocks with an exit wound at the hip. Elapsed time from injury to evacuation was 90 minutes.

SSG Brown's lessons learned:

He used Hespan™ instead of Hextend™ because that was what was available.

It was difficult to communicate while the casualty was being loaded onto the helicopter - you can't talk under rotor blades.

There should be more training for SF units on hemostatic agents.

The unit was told not to use QuikClot; they had HemCon, but he had not trained on it prior to deployment.

TCCC training for non-medical operators is critical.

There was a significant increase in blood pressure with Hespan. SSG Brown questioned whether Lactated Ringer's would have been a better choice for this casualty.

100209 Combat Casualty Scenario **SGT Bryan Rippee**

SGT Rippee is from the 75th Ranger Regiment. He presented a combat casualty scenario from OEF. He was part of a forty-man Special Operations assault force that was taking fire as they approached an objective that contained a number of known Taliban members. During the firefight, a member of the patrol detonated a pressure plate improvised explosive device (IED). The internal medical support consisted of one medical officer and two Special Operations combat medics. The unit suffered seven casualties after detonation of the IED. The individual

who triggered the device had catastrophic injuries and died immediately. The other six casualties survived. Hostile fire continued throughout the casualty management.

SGT Rippee's lessons learned:

Talon™ litters were very effective in transporting the litter patients.

The evacuation team ran out of litters and was forced to improvise - an assault ladder was found to be an effective substitute.

When used properly, the improved Hypothermia Prevention and Management Kit (HPMK) was not affected by the rotor blast of a CH-47 - a significant improvement from the last generation of HPMK.

A quick muster is a vital part of casualty management – in this case it enabled the missing assaulter to be located rapidly and rescued from the nearby creek.

The King LT is a practical and convenient airway adjunct on occasion, but did not work well for a near-drowning casualty.

A casualty with a traumatic amputation was found to be shivering at the Casualty Collection Point, despite having a warming blanket.

Non-medical First Responders trained in TCCC proved to be invaluable to the successful management of this casualty situation.

There are still problems with adherence in some of the commercially available chest seals.

100420 Combat Casualty Scenario SFC Jon Clouse

SFC Clouse presented a combat casualty scenario that occurred in June, 2008 during his deployment to Afghanistan with MARSOC. On this operation, two Marine Special Operations Teams accompanied a platoon from the Afghan National Army on a sensitive site exploitation (SSE) after a planned bombing of the quarters of a mid-level enemy commander. The bombing mission was cancelled, but the ground force was ordered to proceed into the target canyon.

SFC Clouse's lessons learned:

Never get in a firefight without all of your equipment on you. Throughout the entire incident, he rendered all treatments using items on his person or taken from other operators' Individual First Aid Kits (IFAKs). His aid bag was sitting in a vehicle. Fortunately, he was carrying a large amount of supplies on his person.

Have a plan for what to do if Care Under Fire lasts for a long time. During

the entire time he was in the canyon (4 hours), he received accurate enemy fire.

Be careful about when you call for a MEDEVAC.

All operators must be trained in TCCC to a standard while under stress. All of the procedures he performed while in the kill zone were basic, operator-level TCCC tasks. He performed no higher level, Special Forces Medical Sergeant-type tasks or procedures.

Due to lack of battlefield trauma care training conducted under stress, none of the operators in the canyon were able to recognize and treat a chest compromise, which is a basic TCCC task. As a result, they called for SFC Clouse's assistance, causing him to twice break from cover and run through the kill zone (violating basic TCCC principles.)

100803 Combat Casualty Scenario **SFC Alex Alvarez**

In this operation from OEF, a night assault was conducted against a Taliban compound. After an offset helicopter insertion followed by a two-hour patrol, mission personnel arrived at the compound and secured the location. The compound was later attacked at daybreak by a large enemy force moving in from several sides. SFC Alvarez treated a casualty who had sustained a gunshot wound (GSW) to the abdomen that entered in the left lower quadrant and exited in the right upper quadrant. The ongoing firefight delayed CASEVAC for 2.5 hours and the casualty had to be sustained in the field.

SFC Alvarez's lessons learned:

Rapid evacuation of combat casualties is not always possible. Medics will continue to care for severely wounded casualties in austere locations in situations where evacuation is delayed. They should be trained and equipped with multiple agents for the management of non-compressible hemorrhage. In SFC Alvarez's opinion, the battlefield use of rVIIa saved this casualty's life.

Medics should carry more rVIIa to provide for multiple casualties and multiple doses during delayed or prolonged evacuation.

Ketamine worked better than narcotics in this casualty and is less likely to cause hypotension. This agent should be used early when it is indicated.

Abdominal wounds are hard to pack with HemCon. A gauze-type agent or a hemostatic agent that could be injected into the abdomen would be helpful.

The Halo chest seal would have worked better if it had been larger.

101116 Combat Casualty Scenario **SrA Lucas Ferrari**

Senior Airman Lucas Ferrari, a Pararescueman from the 48th Rescue Squadron, presented a scenario in which the 66th Expeditionary Rescue Squadron launched two HH-60's to evacuate a wounded British soldier. Each helicopter had a standard flying crew; in addition, there were 2 Pararescuemen (PJs) and a Combat Rescue Officer in the Lead Aircraft (Pedro 66) and 3 PJ's in the Trail Aircraft (Pedro 67). The casualty was initially reported as stable with only a broken arm, but his evacuation priority was upgraded due to a possible neurological deficit.

Senior Airman Ferrari's lessons learned:

Dismount the aircraft with all the gear you are likely to need.

There should be a contingency plan for establishing communications when there is signal jamming present.

Establish a security perimeter as soon as possible in casualty scenarios to reduce civilian activity at the site and protect against threats to the evacuating assets and personnel.

Carry necessary personal equipment at all times.

All medics should carry or wear fire rescue gloves.

Stronger medical continuity should be established among all service medics.

Speed is security.

Fight against complacency.

Always ADAPT to your conditions.

The Talon II is the preferred litter.

The live tissue training that he underwent within 30 days prior to his deployment was a major factor is SrA Ferrari's ability to successfully perform a surgical airway in a very challenging tactical setting.

The LMA, though appreciated among British medics, may not be the definitive airway for casualties with severe neurological deficits..

Some units must do without proper medical gear like Talon II litters for lack of funds.

Do not do things for casualties that do not really need to be done.

110208 Combat Casualty Scenario I **MSG John Steinbaugh**

MSG Steinbaugh presented a casualty vignette from Afghanistan. His unit conducted a daylight assault on a high value target in a walled compound. The mission was supported by 2 tactical evacuation-capable helicopters.

As they reached the walls of the compound, the enemy dropped several grenades over the wall, and a gunfight ensued.

MSG Steinbaugh's lessons learned:

> Unit should rehearse moving casualties off a roof by litter and ladder prior to deployment.
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> A medic should not allow himself/herself to get separated from his/her Aid Bag or Critical Care Kit.
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> Always swap with the flight medic for a replacement litter when a casualty is evacuated.
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> Medics should always carry extra pens and markers.
>
> Do not forget to give antibiotics whenever they are indicated.
>
> Giving plasma at the point of injury could save many lives.

110208 Combat Casualty Scenario II **SFC Fred Zeims**

SFC Zeims presented a casualty vignette from Operation Enduring Freedom. In his scenario, a 4-vehicle Italian convoy was attacked on a busy urban street by a car bearing 6000 pounds of explosives. Of the Italians in the convoy, 6 were killed and 6 were wounded. Twenty-nine civilians were killed and at least 69 were wounded.

SFC Zeim's lessons learned:

> There should be some kind of cricothyroidotomy kit in every blowout kit.
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> Medical personnel should continue to train with improvised materials like sticks and rags for tourniquets. In a Mass Casualty Incident, they will likely be needed above and beyond what medics carry in their kits.
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> Medics should maintain proficiency in suturing.
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> When needed, make full use of resources provided by indigenous medical facilities.

110208 Combat Casualty Scenario III **MSG Dean Bissey**

MSG Bissey presented a casualty scenario from Afghanistan in which he was a crew member aboard one of two DUSTOFF medevac helicopters that responded to a 9-line request from an American unit (approximately two platoons) whose convoy had been ambushed.

MSG Bissey's lessons learned:

Halon fire suppression systems have been installed in up-armored Humvees in both OEF and OIF. Several of the casualties in this incident suffered hypoxia and pulmonary insult due to Halon exposure.

All DUSTOFF Crew Chiefs in the 82nd Airborne are cross-trained as part of the medical team. This has helped tremendously.

Intraosseous access is faster than IV access when resuscitation fluids are needed.

Aggressively gaining hemostasis should take precedence over IV or IO access.

Early, aggressive use of tourniquets is warranted to control extremity hemorrhage.

An aggressive pre-deployment training schedule (TCCC, BCT3, TCMC, LTT, ACLS, PALS) is priceless.

Medics need a velcro uniform patch to distinguish them from medically trained Crew Chiefs.

EZ-IO™ kits work well.

When a medic leaves the helicopter to care for wounded on the ground, he should replace his flight helmet with an Army Combat Helmet with communications gear.

110405 Combat Casualty Scenario **HMC Jeremy Torrisi**

HMC Torrisi presented a vignette from his recent deployment to Operation Enduring Freedom. During this deployment, his unit, a Marine Special Operations Team, was engaged in training Afghan commandoes. In this vignette, their mounted patrol had nearly 50 passengers total, with two Corpsman, including the Chief. At about 10:00 AM, while the convoy was moving at about 45 MPH, the lead vehicle went out of control and rolled over several times. This was an open-backed Humvee with seven passengers aboard, and all seven were killed or injured.

HMC Torrisi's lessons learned:

Be creative in training experience. Include mass casualty events. The shock created by a mass casualty event can greatly reduce the combat effectiveness of inexperienced personnel.

The Corpsmen were overtasked by the number of severe injuries and too few translators.

Rehearse response to mass casualties with your team and your partnered force. Stress accountability for people and gear.

Consider both acute and long-term psychological effects of a mass casualty event on everyone involved, not just your own unit personnel.