COMBAT OPHTHALMOLOGY
WHEN THERE ISN’T AN
ASSIGNED OPHTHALMOLOGIST

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An unclassified overview of Special Operations in Afghanistan
Mobilization – OEF 2002-2003
A combination of Active Duty and National Guard from around the country
Deployment

Denver, CO (12 Noon, Alabama (Zulu – 5:00))

Approx. 7,500 Nautical Miles

London, England (5pm, GMT or “Zulu”)

Bagram, Afghanistan (9:30 pm, Afghanistan (Zulu + 4:30))

Unclassified
Current Doctrine for Health Service Support in Joint Operations

Joint Publication 4-02

Doctrine for Health Service Support in Joint Operations

30 July 2001
The Wartime Medical Mission: Conserve the Fighting Strength

LEVELS OF HEALTH SERVICE SUPPORT

- Self-aid, buddy aid, and combat lifesaver skills (LEVEL I)
- Resuscitation, stabilization, and application of emergency procedures to prolong life (LEVEL II)
- Care requiring clinical capabilities (surgery) (LEVEL III)
- Not only surgical capability, as in Level III, but also further therapy during the recovery and rehabilitative phase (LEVEL IV)
- Definitive, convalescent, restorative, and rehabilitative care normally provided by the military, Department of Veterans Affairs, Continental United States civilian hospitals, or commander in chief-approved safe havens (LEVEL V)

Figure II-2. Levels of Health Service Support
Echelons of Care I-V

Combat Health Support organized into five echelons of Support

- Echelon I – IV in TO
  I – EMT, ATLS (at BAS)
  II – Cont’d resuscitation
  III – Resuscitative Surgery
  IV – Definitive Care

- Echelon V: CONUS (Continental US )
  V – Definitive & Restorative Care
Echelons of Care – I-II

Level I: unit level soldier’s first medical care includes self-aid, buddy aid, combat lifesaver, combat medic, treatment squad (BAS)

Level II: Division-level health svc support includes FSTs (Forward Surgical Teams), medical companies, ASMBs limited lab, x-ray, pharmacy, temp hold first level to have Group O PRBCs
Echelons of Care – III-V

Level III: corps-level HSS includes MASH, CSH, EVAC, and FH in reduced-level enemy threat environment; FFP, blood products, platelets, etc
Treated and RTD or stabilized for evac out of corps or out of TO altogether

Level IV: COMMZ-level EAC (Echelon above corps) HSS; Field Hospital (FH)

Level V: General Hospital (GH), most definitive care CONUS or OCONUS
US Army Medical Support
WWII Model Linear Theater

Figure 3-1. Representative Army support structures in fully developed theater
Hospital Resources

Figure 1-1. Echelons of combat health support.
Current Combat/COMMZ
Not as “Linear” as before

This example depicts a CINC’s AOR in which a theater of operations has been designated. The combat zone includes that area required for the conduct of combat operations. The Communications Zone (COMMZ) in this example is contiguous to the combat zone.

Figure 3-18
Hospital Components

Although the HUB has 236 beds, when it is used as the base component for the FH, it is only staffed to provide hospitalization for 224 patients. In the FH configuration, the HUB has two intensive care wards that provide care for up to 24 patients. By contrast, in the CSH and GH configurations, the HUB has three intensive care wards that provide care for up to 36 patients. This is the reason for the 12-patient difference in the FH configuration.
Hospital Augmentation Team,
Head and Neck

New organization as a result of MRI
1991-2001 Army Transition

  - Desert Storm
  - Peace “dividend” BRAC, downsizing, etc
- 2001: 10 Army Divisions
  - OEF – Opn Enduring Freedom (Afghanistan)
  - OIF - Operation Iraqi Freedom
- Army Eye Residents: 12 down to 6 yearly
Afghanistan quickly evolved into a “relatively” safe combat zone.

When the first CSH rotated “home” the replacement unit did not have an ophthalmologist. Eye surgeon did not deploy with “head and neck” team.

With the end of significant combat operations, eye surgery was not anticipated.

Optometrist in TO
ROE – “Rules of Engagement” however put CSH in a bind regarding host nation.

During military operations, MEDCAPs (Medical Civic Action Programs) often provide “routine” care on a very limited basis for host nation (HN)

When US military deploys, the ROE normally covers emergency care for ANYONE in TO for “life, limb, or eyesight” – Hard if no vision saving capability
Enzenauer Volunteer Med Center, Kabul, Afghanistan
U.S. Army Special Forces

Operational Detachment Alpha – ODA
A 12-man unit comprised of 10 non-commissioned officers (NCOs) with various specialties, 1 warrant Officer and 1 Officer

Executive Officer – Warrant Officer
Team Commander – Captain

- Expert in Foreign / Domestic Weapons
- Typically Team Snipers
- Expert in demolitions
- Construction
- Demining & Booby-traps
- Specializes in trauma
- EMT qualified
- HF/UHF/VHF
- SATCOM
- Computer
- Intelligence Analysis
- Interrogation
- Human Intelligence

Team Sergeant
Most experience of one of the 10 enlisted soldiers
Special Forces Flight Surgeon

Battalion Surgeon for SF battalion is a “flight surgeon” – admin for SCUBA, HALO, airborne physicals

Basic sick call and emergency ATLS, ACLS

Since an SF battalion is not “authorized” an ophthalmologist, I could not requisition a “division optometry” set, which has slit lamp, chair, phoropter, etc.
Special Forces Flight Surgeon – Part-Time Eye Surgeon

The CSH Commander was a general surgeon who was resident in Colorado with me at Fitzsimons Army Medical Center almost 20 years earlier.

The CSH (Combat Support Hospital) set up in Afghanistan (Bagram) did not have an assigned ophthalmologist.

Almost 10 million Russian mines left in Afghanistan made that a “bad decision.”
Part-Time Eye Surgeon (Cont’d.)

- The CSH had an 20 YO Wild operating microscope without a focusing pedal
- No ophthalmic “sets”
- Assigned OMF surgeon and ENT surgeon
- Plastics set and ENT set
- 40-45 miles of “bad road” between Bagram (CSH) and Kabul (SF FOB)
Traveling Eye Surgeon (Cont’d.)
Traveling Eye Surgeon (Cont’d.)
Part-Time Eye Surgeon (Cont’d.)

- Acknowledgements: former military colleagues from Colorado “equipped” the Army eye service
  - Dr. Will Waterhouse (retina, Grand Junction, CO)
  - Dr. Stu Farris (oculoplastics, Springfield, IL)
- Indirect ophthalmoscope and lenses
- Simple “instrument set” with forceps, scissors, specula
- Ophthalmic suture, 6-0 and 8-0 vicryl along with 9-0 and 10-0 nylon
- Simcoe I-A
- Weck-cell sponges
EMERGENCY & ELECTIVE EYE
SX IN AFGHANISTAN

- Carl Sagan level of land mines....”billions and billions”, not really but A LOT
- Ruptured globes
- Eviscerations and enucleations
- “Winning the hearts and minds” strabismus surgery and reconstructive
Most kids are healthy
Diseases left untreated
Probable orbital dermoid – left without treatment threat to vision
Typical Ruptured Globe

- Child near the dead child who set off the mine
- Generally took a week or so to get to the US military hospital in Afghanistan
- Evisceration to prevent sympathetic ophthalmia and preserve orbit
- Marble to retain orbit
Typical Ruptured Globe - Cont’d.
Typical Ruptured Globe (Cont'd.)
Typical OR – Anesthesia packing his 9 mm Baretta
Ruptured globe with lid lac
Limbus-to-limbus globe rupture
Evisceration
Kid’s marble implant
Nice orbital symmetry
Working on those who would harm us – man injured fabricating IED
Son – OS “saved” OD evisc.
We had a very competent and creative OMS surgeon at the CSH.

In Bagram, watch a couple, do a bunch.

After doing at least 5-6 eviscerations together, the OMS starting doing eviscerations himself when there was no chance for preserving vision (usually severe globe ruptures, and generally open eye for 5-7 days before getting to CSH).
Typical “salvageable” eye

- Crude lensectomy with Simcoe I/A
- Wek cell vitrectomy
- When healed, refer to NOOR Eye Hospital, a charity-run Eye Hospital (one US trained ophthalmologist and several Afghan ophthalmologists) for secondary lens implant
- NOOR (means “light” or “enlightenment” in Dari) next to Kabul Medical University
Reconstruction when possible

- Simple Reconstruction
- Creative grafts
Mine victim: vision-threatening ectropion
Post-op repair and tarsorrhaphy
EYE and OMS working “above”
GS getting foreskin for graft “below”
Combined eye surgery and circumcision at the same time
Post-Op Close-up
“Winning hearts & minds”
Pre-op
Post-Op Strab ET
“Winning more hearts & minds”
“More hearts & minds” post-op
MA Army NG “pre-op;”
MA ARMY NG Post-Op
“Meatball” Minor Surgery
Enzenauer Volunteer Med. Ctr.
Kabul, Afghanistan
Your Neighbor Went To War

Your Neighbor Went To War

Reality and the War on Terror

CAPTAIN B. DIGGS BROWN, JR.
UNITED STATES ARMY SPECIAL FORCES
"It is not the critic who counts, not the man who points out how the strong man stumbled, or where the doer of deeds could have done better. The credit belongs to the man who is actually in the arena; whose face is marred by the dust and sweat and blood; who strives valiantly; who errs and comes short again and again; who knows the great enthusiasms, the great devotions and spends himself in a worthy course; who at the best, knows in the end the triumph of high achievement, and who, at worst, if he fails, at least fails while daring greatly; so that his place shall never be with those cold and timid souls who know neither victory or defeat."

TEDDY ROOSEVELT (Paris Sorbonne, 1910)
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