



DEVELOPING A MEDICATION PROFILE OF BURN PATIENTS WITH AND WITHOUT POST TRAUMATIC STRESS DISORDER



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The use of Army medical and/or other Army records in the preparation of this material is acknowledged, but is not to be construed as implying official Department of the Army approval of the conclusions presented.

Background

Previously, we reported:

- Post Traumatic Stress Disorder (PTSD) is common in burned combat casualties and civilians treated at the same burn center (United States Army Institute of Surgical Research) despite differences in age, Total Body Surface Area (TBSA), and Injury Severity Score (ISS).

- High TBSA and ISS are associated with PTSD.

- The psychological outcome of PTSD may be related to the traumatic event, the burn injury, and not the environment where the event occurred.

- Medications were not assessed. Previous literature suggests that there may be a relationship between PTSD and use of pain medications.

Objectives

- Compare combat casualties and civilians treated at the USAISR

- Compare service members' and civilians' age, total body surface area (TBSA), and injury severity score (ISS)

- Identify the relationship between PTSD and the number of medications used at time of discharge

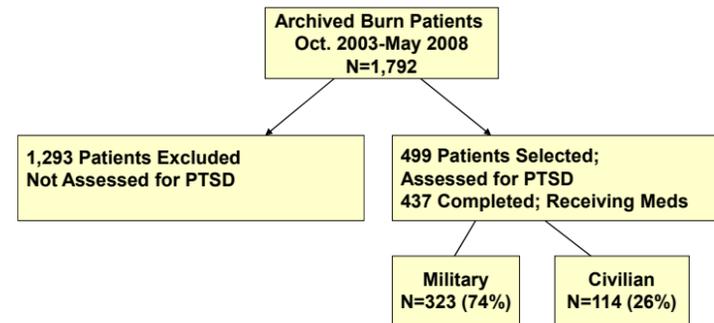
- Identify the relationship between certain classification of medications and PTSD

Methods

- Retrospective review of clinical records

- PTSD assessments
- Medications prescribed at time of discharge

- Established cutoff score for PTSD screening was ≥ 44



Results

Table 1. Medications used among Service Members

| | PTSD Screening | | | | TOTAL | |
|------------------------------------|----------------|-------|------------|-------|------------|-------|
| | YES | | NO | | N | % |
| | N | % | N | % | N | % |
| Narcotics^a | | | | | | |
| Yes | 78 | 97.5 | 234 | 96.3 | 312 | 96.6 |
| No | 2 | 2.5 | 9 | 3.7 | 11 | 3.41 |
| Antibiotics^b | | | | | | |
| Yes | 22 | 27.5 | 42 | 17.28 | 64 | 19.81 |
| No | 58 | 72.5 | 201 | 82.72 | 259 | 80.19 |
| Antihistamine^c | | | | | | |
| Yes | 73 | 91.25 | 227 | 93.41 | 300 | 92.88 |
| No | 7 | 8.75 | 16 | 6.6 | 23 | 13.31 |
| NSAIDs^d | | | | | | |
| Yes | 15 | 18.75 | 31 | 12.75 | 46 | 13.31 |
| No | 65 | 81.25 | 212 | 87.24 | 277 | 85.75 |
| Sedatives^e | | | | | | |
| Yes | 13 | 16.25 | 39 | 16.05 | 52 | 16.1 |
| No | 67 | 83.75 | 204 | 83.95 | 271 | 83.9 |
| Antidepressants^f | | | | | | |
| Yes | 11 | 13.75 | 12 | 4.94 | 23 | 7.12 |
| No | 69 | 86.25 | 231 | 95.06 | 300 | 92.88 |
| Anticonvulsants^g | | | | | | |
| Yes | 8 | 10 | 29 | 11.93 | 37 | 11.46 |
| No | 72 | 90 | 214 | 88.07 | 286 | 88.54 |
| Total | 80 | | 243 | | 323 | |

(b) $p \leq .05$ (f) $p \leq .01$

Findings:

- The use of antibiotics ($p \leq .05$) and antidepressants ($p \leq .01$) is significantly associated with PTSD in the military sample.

- 28% of service members who screened positive for PTSD were taking an antibiotic.

- 14% of service members that screened positive for PTSD were taking an antidepressant.

- No category of medication was significant for PTSD in the civilian sample.

Table 2. Medications used among Civilian

| | PTSD Screening | | | | TOTAL | |
|------------------------------------|----------------|-----|-----------|-------|------------|-------|
| | YES | | NO | | N | % |
| | N | % | N | % | N | % |
| Narcotics^a | | | | | | |
| Yes | 20 | 100 | 91 | 96.81 | 111 | 97.37 |
| No | 0 | 0 | 3 | 3.19 | 3 | 2.63 |
| Antibiotics^b | | | | | | |
| Yes | 1 | 5 | 15 | 15.96 | 16 | 14.04 |
| No | 19 | 95 | 79 | 84.04 | 98 | 85.96 |
| Antihistamine^c | | | | | | |
| Yes | 18 | 90 | 85 | 90.43 | 103 | 90.35 |
| No | 2 | 10 | 9 | 9.57 | 11 | 9.65 |
| NSAIDs^d | | | | | | |
| Yes | 0 | 0 | 5 | 5.32 | 5 | 5.32 |
| No | 20 | 100 | 89 | 94.68 | 109 | 95.61 |
| Sedatives^e | | | | | | |
| Yes | 2 | 10 | 5 | 5.32 | 8 | 6.14 |
| No | 18 | 90 | 89 | 94.68 | 106 | 93.86 |
| Antidepressants^f | | | | | | |
| Yes | 2 | 10 | 6 | 6.38 | 7 | 7.02 |
| No | 18 | 90 | 88 | 93.62 | 107 | 92.98 |
| Anticonvulsants^g | | | | | | |
| Yes | 3 | 15 | 6 | 6.38 | 9 | 7.89 |
| No | 17 | 85 | 88 | 93.62 | 105 | 92.11 |
| Total | 20 | | 94 | | 114 | |

Table 3. Comparison of Service Members and Civilians by age, TBSA, ISS

| | Service Members | Civilian | P-value |
|------|-----------------|-------------|---------|
| Age | 25.68±5.95 | 38.90±16.01 | P<.001 |
| TBSA | 16.23±17.41 | 14.15±16.13 | NS |
| ISS | 12.67±12.29 | 7.87±8.50 | P<.001 |

Table 4. PTSD Rates among Service Members and Civilians

| | PTSD | No PTSD |
|-----------------|----------|-----------|
| Service Members | 80 (25%) | 243 (75%) |
| Civilian | 20 (18%) | 94 (82%) |

Table 5. Mean meds used by Service Members and Civilians

| | Mean Total Medications | P-Value |
|-----------------|------------------------|---------|
| Service Members | 4.42±2.96 | NS |
| Civilian | 4.20±2.40 | NS |

Table 3. TBSA was not significant, but was slightly higher in service members than civilians. Age was higher in civilians than service members (25.68 vs. 38.90, $p = <.001$). ISS was higher in service members than civilians (12.67 vs. 7.87, $p = <.001$).

Table 4. At time of discharge, 80 (25%) service members had PTSD and 243 (75%) service members had no PTSD; 20 (18%) civilians had PTSD and 94 (82%) civilians did not have PTSD.

Table 5: No difference in the number of medications prescribed at time of discharge was found.

Conclusions

- The use of medications is similar in service members and civilians.

- The association between antibiotics and PTSD may be related to higher TBSA and ISS.

- The association between antidepressants and PTSD is expected.

- Limitations include:

- Small sample size of patients with PTSD screening
- Retrospective design

References

- Gaylord, K.M., Holcomb, J.B. & Zolezzi, M.E. A comparison of posttraumatic stress disorder between combat casualties and civilians treated at a military burn center. *J Trauma*. 2009; 66: S191-S195.
- Schwartz, A.C., Bradley, R., Penza, K.M., Sexton, M., Jay, D., Haggard, P.J., et al. Pain medication use among patients with posttraumatic stress disorder. *Psychosomatics*. 2006; 47: 136-142.