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PTSD May Be Risk Factor for Dementia

By John Gever, Senior Editor, MedPage Today
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MedPage Today Action Points

- Point out that this study can only document an association and cannot determine causality
- Note that if causality is eventually determined, it would have major implications as it would be possible that many other groups suffering from PTSD would also be at risk for dementia.

Review

Older veterans with a history of post-traumatic stress disorder (PTSD) are at increased risk for developing dementia, even if they had not been wounded in battle, researchers found.

Their risk of dementia was double that of veterans who did not have PTSD, including those who had received the Purple Heart, according to Mark E. Kunik, MD, MPH, of the Michael DeBakey VA Medical Center in Houston, and colleagues.

But although the study sample was large -- more than 10,000 former service members -- it would be premature to conclude that PTSD causes dementia, the researchers cautioned in their study published online in the *Journal of the American Geriatrics Society*.

"It could be that cognitive impairment in PTSD is an early marker of dementia, PTSD is an independent risk factor for dementia, or PTSD and dementia share a common risk factor such as low cognitive reserves," Kunik and colleagues wrote.

"It is essential to determine whether risk of dementia can be reduced by treating PTSD effectively," they added. "This could have enormous implications for veterans returning from [Iraq]."

Similar results were published [earlier this year](#) from another VA system-based data analysis.

In an editorial accompanying the study report, Soo Borson, MD, of the University of Washington in Seattle, pointed out that it may be exactly those veterans whose future clinical course will answer the questions raised by Kunik and colleagues.

"Long-term prospective follow-up of veterans returning from Iraq and Afghanistan will eventually tell us more, if funding for continued detailed tracking of these cohorts can be sustained," Borson wrote.

Some existing data sets may be helpful, but these are smaller and many participants may have died already, she noted.

For the current study, Kunik and colleagues examined records of veterans seen at least twice from 1997 to 1999 in VA centers in the South Central U.S., who had either a diagnosis of PTSD at that time or had received the Purple Heart for combat-related wounds or injuries.

They categorized these patients into three groups: 3,660 with PTSD and no Purple Heart; 153 with PTSD and a Purple Heart; and 1,503 with a Purple Heart and no PTSD.

For comparison, Kunik and colleagues also identified 5,165 patients seen in the same VA centers from 1997 to 1999 who did not have PTSD or Purple Hearts.

Medical records covering outpatient visits through September 2008 were included in the analysis. Dementia either at baseline or diagnosed during follow-up was identified from ICD-9 codes in their records.

After adjusting for variables including age, sex, race, comorbidities, and number of primary care and mental health visits during the baseline period, Kunik and colleagues calculated the following odds ratios for new-onset dementia during follow-up:

- PTSD without Purple Heart versus no PTSD or Purple Heart, 2.2 (95% CI 1.8 to 2.6, $P<0.001$)
- PTSD without Purple Heart versus Purple Heart and no PTSD, 1.7 (95% CI 1.4 to 2.2, $P<0.001$)
- PTSD with Purple Heart versus no PTSD and no Purple Heart, 1.4 (95% CI 0.7 to 2.7, $P=0.09$)
- PTSD with Purple Heart versus PTSD without Purple Heart, 0.6 (95% CI 0.4 to 1.1, $P=0.13$)

Other comparisons yielded odds ratios close to 1 and not even approaching statistical significance.

Findings were similar when the researchers looked at dementia prevalence, including patients with dementia during the baseline period as well as those receiving the diagnosis for the first time during follow-up.

Overall, the patients with PTSD without a Purple Heart developed dementia during follow-up at an unadjusted rate of 9.5%, compared with rates of 4.0% to 6.8% for the other groups ($P<0.001$).

Prevalence rates were also higher in the PTSD-without-Purple-Heart group, at 11.1% versus 4.5% to 7.2% in the other patients.

Limitations to the analysis included the reliance on administrative records, lack of data on some potential confounders such as apolipoprotein E genotype, uncertain racial status for some patients, and the use of Purple Heart medals exclusively to indicate wounds and injuries.

The study was supported by a unit of the VA health system.

Study authors and the editorialist declared that they had no financial conflicts of interest. Several were VA employees.

Primary source: Journal of the American Geriatrics Society

Source reference:

Qureshi S, et al "Greater prevalence and incidence of dementia in older veterans with posttraumatic stress disorder" *J Am Geriatr Soc* 2010; DOI: 10.1111/j.1532-5415.2010.02977.x.

Additional source: Journal of the American Geriatrics Society

Source reference:

Borson S, et al "Posttraumatic stress disorder and dementia: A lifelong cost of war?" *J Am Geriatr Soc* 2010; DOI: 10.1111/j.1532-5415.2010.03050.x.

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