Trauma resurgence and impact on a dementia process. Detection and treatment.

Nicolas Delrue, Université Paris 8 (France), Laboratoire de Psychopathologie et Neuropsychologie
Arnaud Plagnol, Université Paris 8 (France), Laboratoire de Psychopathologie et Neuropsychologie
PTSD in the elderly

✓ Post Traumatic Stress Disorder (PTSD) is an anxiety disorder.

✓ It can remain silent for years and can be reactivated after years as delayed PTSD.

✓ Delayed PTSD would be the most common and characteristic in the elderly.

✓ 20 % of those who experienced wars might have a PTSD.

✓ Significant life changes, such as entry in a nursing home, could result in a delayed PTSD.
Links between PTSD and dementia

✓ Relationships seem to exist between PTSD and dementia.

=> PTSD could constitute a risk factor for developing dementia.
For example: veterans with PTSD are twice as likely to develop dementia.

✓ PTSD and Alzheimer’s Disease (AD) are associated with cognitive disorders: attention and memory systems.

✓ There is an implication of identical brain structures such as the hippocampus.
The episodic memory is linked to hippocampal structures.

The episodic memory is the first memory system affected by AD.

The episodic memory is also affected by PTSD.

Stress treatment can improve memory.

No longitudinal study seems to exist about the impact of delayed PTSD on the evolution of Alzheimer's disease (AD).

Our objective is to check if a specific treatment of a resurgent PTSD can improve the evolution of AD.
Design

- A longitudinal study (3 years).
- 3 nursing homes.
- A target population (n=20) with AD and PTSD
  A control population (n=20) with AD but no PTSD.
- Repeated quantitative and qualitative measures for the two populations (MMSE, ADAS-Cog, MIS-D, TEMPau, ADRQL).
- The measures target the episodic memory as an indicator of the AD’s seriousness.
Process

T0. Evaluations
- PTSD treatment for the target group;
- follow-up for the control group.

T1 (after 6 months). Evaluations.

Follow-up.

T2 (after 6 months). Evaluations.
PTSD treatment with **Cognitive behavioral therapy (CBT)** for subjects with PTSD:

- 20 therapy sessions
- written guide for therapy.

<table>
<thead>
<tr>
<th>Session</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Therapeutic alliance</td>
</tr>
<tr>
<td>2 à 4</td>
<td>Relaxation learning</td>
</tr>
<tr>
<td>5 à 8</td>
<td>Life review</td>
</tr>
<tr>
<td>9</td>
<td>Hierarchical list</td>
</tr>
<tr>
<td>10 à 15</td>
<td>Exposition</td>
</tr>
<tr>
<td>16</td>
<td>Evaluation</td>
</tr>
<tr>
<td>17 à 19</td>
<td>Cognitive restructuring</td>
</tr>
<tr>
<td>20</td>
<td>Evaluation.</td>
</tr>
</tbody>
</table>
The main cause of delayed PTSD is war (X8), then death (of spouse X6), disease/medical error (X3) and natural disaster (X2).

After treatment (20 therapy sessions with CBT), disappearance of PTSD symptoms ($p<0.01$).
For the target group, the average number of **errors in words recall** decreases by 1.67 ($p<0.01$).

For the control group, the average number of **errors in words recall** increases by 1.40 ($p=0.05$).
For the target group, the average number of false recognitions decreases by 1.17 \( (p<0.01) \).

For the control group, the average number of false recognitions increases by 1.50 \( (p<0.01) \).
For the target group, the average score in immediate recall increases by 1.47 (p<0.01).

For the control group, the average score in immediate recall decreases by 2.07 (p<0.01).
For the target group, the average score in delayed recall increases by 2.47 ($p<0.01$).

For the control group, the average score in delayed recall decreases by 2.26 ($p<0.01$).
For the target group, the average number of recent memories increases by 6.44 ($p<0.01$).

For the control group, the average number of recent memories decreases by 3.84 ($p<0.01$).
For the target group, the average number of life time memories increases by 8.84 (p<0.01).

For the control group, the average number of life time memories decreases by 1.8 (p<0.01).

---

**Life time memories score.**

**Target population (PTSD + AD)**

- First passation (average)
- After PTSD treatment (average)

---

**Life time memories score.**

**Control population (AD only)**

- First passation (average)
- Second passation (average)
For the target group, the average MMSE score increases by 1.14 \( (p<0.01) \).

For the control group, the average MMSE score decreases by 2.0 \( (p<0.01) \).
For verbal episodic and autobiographical memory, the target population (AD + PTSD diagnosed and treated) shows a positive evolution in comparison to the control population (AD only).

These results show that with a PTSD treatment, there may be an improvement of:
- traumatic symptoms,
- but also memory disorders
- and dementia evolution.

These results show that it is relevant to detect and treat PTSD in the elderly with AD to limit cognitive decline.

No conflict of interest.

Thank you for your attention…