Visual Disturbance Following TBI
Assessment and Treatment from an SLP’s Perspective

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Disclosures

- Per diem speech-language pathologist, Catholic Medical Center
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What is Hemispatial Neglect?

- The syndrome of hemispatial neglect is characterized by reduced awareness of stimuli on one side of space, even though there may be no sensory loss.¹
- Attention is the issue, not eyesight
How Common is it?

- The estimates are far and wide
- 27% of people with TBI
- 30-50% of stroke survivors
- Much more common in right brain injuries than left

*Common enough to always be on a therapist’s radar*
Severity

**Mild** - Missing a date at the top left of a page, writing a half inch in from the left margin

**Moderate** - Only shaving one side of the face, missing food on the left side of the plate

**Severe** - Turning body away from the neglected side, not recognizing their own limbs

* Rarely occurs in isolation as the only symptom of TBI*
Assessment

Observation

- Meal time observation, *Clinical Swallow Evaluation*
  - Only eating one side of plate, pocketing on one side, spilling from one side
- Walking to the therapy room, any drifting?
- Posture
- Eye contact
- Filling out a clinic intake form
Assessment (continued)

Clock Drawing

- Draw a clock face
- Place the numbers on the clock face
- Set the hands to a specific time
- Used in many standardized measures: CLQT, MOCA, Mini-Cog
- Scored based on accuracy, perseveration, number rotation/spacing, and distortion
Assessment (continued)

Copying and Visual Closure

- Flower completion
- Raven’s Coloured Progressive Matrices
Scanning - Davis Visual Scan Test

"Before you is a sheet of paper. On the other side of the sheet there are letters, numbers and symbols. When I say go, turn your sheet over and circle the first 0 that you see, and then, without picking the pen up, draw a line to the next 0 you see and circle it. Continue drawing lines and circling all of the 0s you see on the paper until you are told to stop. Are there any questions?"
Treatment

1. Improvement of the skill
   a. Reading text
   b. Writing text
   c. Visual spatial skills
   d. Spacial awareness and safety

2. Cueing to scan left and strategies to draw attention left
   a. “Lighthouse Technique”

3. Constraint induced therapy

4. Metacognition/awareness of deficits
Reading Text Formats

8. Circle O

Scanning to practice the back and forth pattern of regular format reading
Anchoring with use of salient marker to train the attention to return to the left margin
- Maps, check books, charts, menus, bills
- Use salient left marker or blocking to guide scanning
# Writing

- Forms
- Emails
- Check book
- Charts
- Calendars
- Schedules

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## Adult Client Information Sheet

### General Information

<table>
<thead>
<tr>
<th>Client Name:</th>
<th>DOB:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client’s Home Address:</td>
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</tr>
<tr>
<td>Phone Number (home):</td>
<td></td>
</tr>
<tr>
<td>Phone Number (cell):</td>
<td></td>
</tr>
<tr>
<td>Email:</td>
<td>Referred by:</td>
</tr>
<tr>
<td>Occupation:</td>
<td>Employer:</td>
</tr>
<tr>
<td>Marital Status:</td>
<td>Spouse’s Name:</td>
</tr>
<tr>
<td>Children (include names, genders, ages):</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physician Name:</th>
<th>Physician Phone:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician Address:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Contact Name:</th>
<th>Relationship:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone:</td>
<td>Email:</td>
</tr>
<tr>
<td>Address:</td>
<td></td>
</tr>
</tbody>
</table>
Visual Spatial Skills

1. Copying drawings
2. Series completion
Spatial Awareness and Safety

- Sit on the left
- Set up important items on the left
  - Items needed to complete a task
  - Dessert
  - The remote control
- Be a lighthouse - use the left anchor strategy and constantly scan left, then right, and back again
Technology

- Apps can be your friends and can help with awareness of deficit and home carry over
- Tactus Therapy, Constant Therapy, Posit Science, Lumocity…and many more
- Apps should be used concurrently with professional therapy services, or as part of a home-program once maximum gains have been reached in therapy
TEACH-M

TEACH-M is an acronym for 6 ways to learn new skills [Ehthardt et al., 2005]. Use TEACH-M to help your patients increase independence with daily tasks (e.g. medication management).

TASK ANALYSIS. Help your patient break down the task into smaller steps.

ERRORLESS LEARNING. Focus on accuracy throughout the task. Emphasize not guessing. Minimize guessing by giving enough help (e.g. verbal cues to double check the medication labels).

ASSESS PERFORMANCE. Teach your patient to check their accuracy after each step of the task.

CUMULATIVE REVIEW. Have your patient repeat all the steps of the entire task. Then review how they did on the entire task.

HIGH NUMBER OF PRACTICE TRIALS. Have your patient complete the entire task over and over again.

METACOGNITION. Help patients improve awareness about how they perform on a task.
- Before the task, ask the patient to predict how they’ll do.
- After the task, ask them to assess how they did.
- Discuss how their assessment of their own performance compares with how they actually did on the task.

Metacognition
Awareness of Deficit
References


