

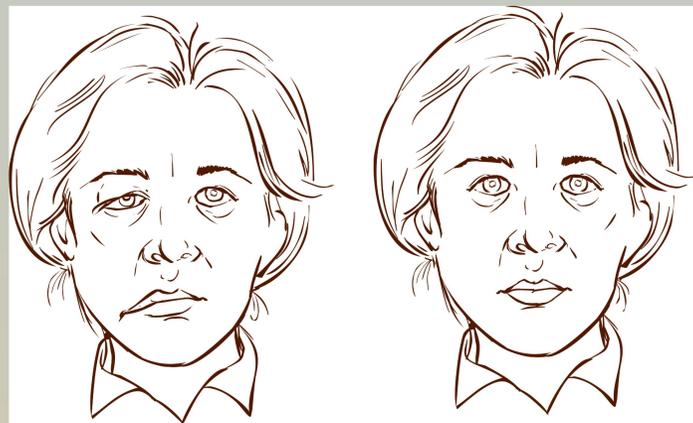
Speech-Language Pathology Case Study: Evaluation & Treatment of Adult Female with Bell's Palsy



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What is Bell's Palsy?

- Bell's palsy is a type of facial paralysis, which typically unilaterally affects the facial nerve due to unknown causes.
- It weakens connections between the brain and the facial nerve.
- Results in drooling, facial weakness, dryness of mouth and eye, changes in taste, and more.
- Synkinesis is an involuntary movement that occurs along with a voluntary movement and can be a possible sequela of Bell's palsy.
- Approximately 71% of patients fully recover, 13% have insignificant sequelae, and 16% have permanent diminished function. About 85% of patients recover in first 3 weeks¹.
- Pharmaceutical and rehabilitative treatments, including facial exercises, massage, biofeedback, electrostimulation, and if necessary speech therapy².
- Sparse evidence about the methods and effects of speech therapy for Bell's palsy patients exists necessitating this case study report.



The Patient

- The patient is a 67-year-old female speech-language pathologist diagnosed with Bell's palsy, resulting in severe facial asymmetry and right-sided weakness.
- Pharmaceutical treatment was administered.
- Physical therapy began 3 weeks post-onset. No improvement was seen after 4 weeks of exercises.
- No spontaneous recovery was noted 4 months post-onset, so patient decided to try speech/dysphagia therapy for oral-phase dysphagia primarily.
- Electroneurography (ENoG) results showed 97% nerve degeneration at start of therapy. Patient also had high frequency hearing loss in the right ear at start.

Evaluation Methods



Evaluation Findings

Evaluation Method	Initial Scores
Synkinesis Assessment Questionnaire (SAQ) Lower score preferred (lowest=9)	9/45 no synkinesis symptoms
Sunnybrook Facial Grading Scale Higher score preferred	4/100 slight movement on right side
Facial Disability Index (FDI) Higher scores preferred	Physical: 11/25 Social: 24/30
House-Brackmann Facial Nerve Grading System (Grades I-VI) Grade I = typical symmetry Grade VI = paralysis	Grade V barely perceptible motion, incomplete eye closure
Iowa Oral Performance Instrument (IOPI) female mean = ~26kPa ³	Right side: 7kPa Left side: 20kPa
Eating Assessment Tool (EAT-10) score > 3 suggests dysphagia Lower score preferred	10/40 concerns of weight loss
Conversation Sample	100% intelligible More effort required /f, s, θ, p, b/
Trials of Solids & Liquids	Oral-Phase Dysphagia

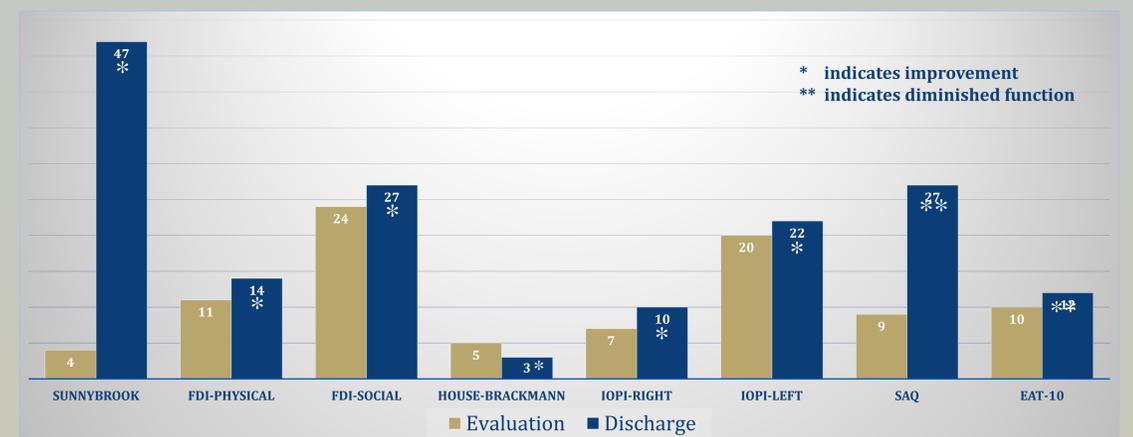
Acknowledgments

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Treatment

Phase One Sessions 1-11	Phase Two Sessions 12-32	Phase Three Session 33-39
<ul style="list-style-type: none"> • 3x/week • Modalities: massage, biofeedback, functional oral-motor exercises, food/drink trials, education, and electrical stimulation • Goals met: adequate use of lingual sweep and upper lip while eating 	<ul style="list-style-type: none"> • 2x/week • Modalities: massage, biofeedback, functional oral-motor exercises, education, and food/drink trials • Changes: increased synkinesis & discontinued electrostimulation • Goal progress: reduced anterior leakage 	<ul style="list-style-type: none"> • 1x/week • Focus on maintenance • Modalities: massage, biofeedback, functional oral-motor exercises, education, food/drink trials, and future recommendations • New goals: rotary chew & full labial closure

Results



Final Thoughts

Discussion

- Clinicians utilized evidence-based practice.
- Results were mostly desirable with exception of synkinesis symptoms and slight eating/drinking discomfort.
- Patient gained notable facial movement and was able to make facial expressions, which was one of her goals.
- It is possible electrostimulation led to involuntary facial hyperactivity resulting in synkinesis⁴.

Limitations

- One-subject case study= not generalizable
- An individualized protocol was utilized since no widely accepted treatment protocol exists.
- There is a chance that improvement was spontaneous, however clinicians believe it is not since 85% of patients recover within first 3 weeks¹, and this patient did not show any spontaneous recovery for the first 4 months.

Next Steps

- Clinicians and patient decided it was time for discharge due to maximal improvement attained.
- Patient has since been attending physical therapy for dry needling. She is motivated to reduce residual Bell's palsy damage.
- More research needs to be conducted with larger sample sizes, control and treatment groups, and more focus on possible synkinesis symptoms in order to create a widely accepted treatment protocol.

References

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