Pharmacological Approaches to Stuttering

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Approach Classification

- Pharmacological Approach
  - Use of medication to reduce primary and secondary behaviors of stuttering

Theoretical Rationale

- Dopamine Hypothesis
  - Increased levels of dopamine in the striatum contribute to an abnormal number of disfluencies.
- Symptom Control
  - Medications used because the drugs' actions were thought to control the underlying factors contributing to stuttering.
- Correlation between Tourette's Syndrome and Stuttering
  - Secondary characteristics of stuttering are similar to twitches and tics found in Tourette's Syndrome. Both have high levels of dopamine present in the subcortical regions of the brain (basal ganglia).

Style of Therapy

- Depends on:
  - The drug
  - The person's age, weight, and gender
  - The person's severity of stuttering
  - Other medications taken
- Pharmacological approach should coincide with speech therapy

Measurement of Success

- Success is defined as:
  - Reduction of syllables stuttered
  - Reduction of secondary characteristics
  - Improvement of social-emotional ratings on quality of life measurements
- Success is measured with:
  - Comparison of pre- and post- language samples
  - Comparison of quality of life measurements
  - Interviews with the person who stutters and their family

Generalization and Maintenance

- Maintenance is addressed by consistently taking the prescribed medication
- Generalization was not addressed with this approach.

Program's Success Rate

- Stager et al.'s (1995) study reported increased fluency during public speaking
  - 48% in baseline to 56% after provided with clomipramine (anti-depressant)
- Macguire et al.'s (2000) study demonstrated a reduction in stuttering frequency
  - 9.6% syllables stuttered to 4.7% syllables stuttered in conjunction with risperidone (dopamine antagonist/antipsychotic)

Strengths

- Helps reduce secondary characteristics of stuttering
- This approach requires less effort
- Positive effects of the medication extend to natural speaking situations

Weaknesses

- Side effects of the drugs
- Combinations of medications can be fatal
- None of these drugs were designed for stuttering or were approved by the FDA to treat stuttering
- Faulty theoretical justifications
- Poor empirical support
  - Weak research designs provide weak positive

Recommend?

- NO!
  - Longevity of side effects is unknown
  - Limited research to support the drugs' effectiveness compared to the placebo effect
  - Drug therapy is expensive and outcome is variable
  - Does not address generalization

References

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