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A COMPARISON OF THE NEUROPSYCHOLOGICAL EFFECTS OF METHYLPHENIDATE AND NUTRITIONAL BEVERAGE VERSUS PLACEBO ON CHILDREN WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER. SC SHNEIDER, GB TAN, DR EGERTON, TW HALE. TX Tech Univ. HSC, Amarillo, TX 79106

Attention-deficit hyperactivity disorder (ADHD) has become a prominent disorder in children, adolescents, and adults. Current treatment modalities generally include the use of stimulant medication, methylphenidate (RITALIN) the most frequently used. Typical and potential side effects have many parents requesting alternatives to the prescription medication.

This study, conducted from May through September 1998, compared the effectiveness of a nutritional beverage SPARK[®], which is marketed by AdvoCare International, with methylphenidate when administered to children (6-17) previously diagnosed with ADHD. This beverage contains neuro-active ingredients such as choline, GABA, tyrosine, and taurine.

The study was a placebo-controlled, double-blind study randomly assigning 72 subjects to three treatment group: methylphenidate (RITALIN) group, the nutritional beverage group (SPARK[®]) and a caffeine group in order to control for caffeine as it is one of the ingredients in the nutritional beverage. All treatments were administered in drink form.

Two evaluative sessions were schedule for each subject: one with a placebo administered two hours prior to testing and one with treatment administered two hours prior to testing.

Assessments consisted of the administration of the Test of Variables of Attention (T.O.V.A.), a computerized neuropsychological continuous performance test. Four indices were measured: omission and commission (both indices of accuracy of response to presentation of visual stimuli), response time (speed from visual stimulus to response) and variability of response time (constancy of response speed). No treatment was significantly different from placebo on commission (response to non-target stimulus) index. All treatments were significant relative to placebo for three of the four indices: omissions (o), response time (RT), variability of response time, (VAR). Nutritional beverage (O/p= .007; RT/p=< .0001; VAR/p= .005), methylphenidate (O/p= .032, RT/p= .001; VAR/p= .007) Caffeine (O/p= .007; RT/p= .0001; VAR/p= .0001).

The results indicate that the nutritional beverage (SPARK[®]) is as effective as methylphenidate (RITALIN) on three of the four measures. Mean differences suggest that it may be more effective on all three measures.

Further studies are needed to identify which of the ingredients in the nutritional beverage are most effective and to quantify the differences in efficacy of the nutritional beverage relative to methylphenidate in a longer trail and with measures directly generalizable to the academic environment.

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