Androgens helped even young boys with Klinefelter's
By: M. ALEXANDER OTTO, Clinical Endocrinology News Digital Network

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SAN FRANCISCO – Boys with Klinefelter's syndrome felt better about themselves and had a better quality of life after 2 years of low-dose androgen therapy, in a randomized placebocontrolled
Trial.

At the end of 2 years, treated boys scored about 10 points better on questionnaires measuring aspects of anxiety, depression, and behavioral problems. "A standard deviation is about 15 points, so a difference of 10 points represents a moderate effect size. Families noticed quite dramatic improvements in social function, depression symptoms, and anxiety symptoms," said lead investigator Dr. Judith Ross, a pediatric endocrinologist at the duPont Hospital for Children in Wilmington, Del.

Although "it's important that the findings are replicated with longer-term studies, gradual, ageappropriate androgen replacement should be considered to optimize self-image and quality of life in childhood," she said at the Endocrine Society annual meeting. Androgen replacement is already standard practice in adolescents and adults with the condition, but not in boys. To see if it would make a difference, investigators from the duPont Hospital for Children randomized 39 boys aged 4-12 years old to 0.06 mg/kg per day of oxandrolone, and 41 to placebo capsules.

Her team monitored oxandrolone patients carefully for undue bone age advancement, lipid-level changes, liver function elevations, blood pressure increases, pubertal changes before age 8, and other possible complications. The only significant problem they found was a drop in six boys of HDL cholesterol below 20 mg/dL, which led to dose reductions.

Doses were dropped a bit in other subjects, too; by the end of the study, placebo patients were receiving an average of about 0.045 mg/kg per day and oxandrolone patients were taking an average of about 0.042 mg/kg per day. "Dose individualization is key to avoid side effects and to optimize positive outcomes. I can't overemphasize how important this is. Physician consultation and dose adjustment are very important in managing the use of oxandrolone in boys with Klinefelter's syndrome," Dr. Ross said.

Scores on the self-reported Revised Children's Manifest Anxiety Scale improved among oxandrolone boys about 10 points from the upper 90s at baseline, with 100 as the population mean. Boys on placebo stayed in the mid-90s throughout the trial. The results were similar for worry scores.

On the Children's Depression Inventory, also a self-reported questionnaire with 100 as the population mean, the scores of treated boys improved more than 10 points from the mid-90s on measures of success in interpersonal relationships, with smaller gains in measurements of selflike and confidence in the future. Boys on placebo started with similar scores, but made no significant gains.

Treated boys remained in the mid-80s on the parent-reported Child Behavior Checklist's measures of social problems such as getting teased, acting too young, and being disliked. Boys on placebo dropped about 5 points; 100 again represented the population mean. The differences were statistically significant, and the groups well matched for karyotype, socioeconomic status, and race, Dr. Ross. The oxandrolone group was about 1.3 years younger on average, which was taken into account in the statistical analysis. Neurocognitive outcomes are currently under analysis.

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For more information on oxandrolone:
http://en.wikipedia.org/wiki/Oxandrolone