

# Obese Teens Face Risk of Spinal Abnormalities

BY PATRICE WENDLING

CHICAGO — Adolescents who are overweight or obese are at risk for spinal disease not typically seen until adulthood.

A review of low back MRIs on 228 adolescents, aged 12-20 years, revealed that lumbar spine abnormalities are most common in youth with a high body mass index (BMI) and back pain, Dr. Judah G. Burns reported at the annual meeting of the Radiological Society of North America.

Among the 188 patients with back pain who met the inclusion criteria, MRI abnormalities were observed in 97 patients (52%). Disc disease was identified in 91 of the 97 patients, including multi-level disease in 40%.

When BMI was calculated for 108 of the children with available weight data, lumbar spine abnormalities were observed in 28 of 44 (64%) children with a BMI greater than the 85th percentile for age, compared with 28 of 64 (44%) children at or below a healthy weight.

The finding that overweight children are more likely to have disc disease might be intuitive, given what is known in the adult population, but this is the first study to document this association and provides additional evidence regarding the damage that childhood obesity can cause, said Dr. Burns, a fellow in diagnostic neuroradiology at the Children's Hospital at Montefiore in New York City.

"We have another link in the chain of the end-organ damage that can result from obesity, and from a public health perspective I think that's significant," he said at a press briefing at the meeting.

The Centers for Disease Control and Prevention reports that 17% of U.S. children, aged 6-11 years, and 18% of U.S. adolescents, aged 12-19, are overweight.

The abnormalities observed in the study are typically associated with degenerative disease of the spine, which occurs with aging and is not usually seen until people are in their 30s, 40s, or 50s, coauthor Dr. Michael Lipton said.

"We basically have evidence of something that is accelerating the aging process dramatically in these children," he said.

Press briefing moderator Dr. Deborah Levine, a professor at Harvard Medical School, Boston, said the findings are worrisome and emphasize the need to stem the rising tide of pediatric obesity.

She did, however, question whether the study might have over-represented children with severe back pain, since MRI is not typically performed for this indication in children. Dr. Burns responded that the reasons prompting pa-

tients to go to the emergency department and receive an MRI were not entirely clear, but that severity of pain might have been the case for many.

The study included 40 adolescents without back pain, and 8 (20%) of these patients had an abnormal MRI. Among these, abnormal MRIs were observed in six adolescents with a BMI greater than the 85th percentile and two with a BMI less than the 85th percentile, although

the difference was not statistically significant, Dr. Burns said.

He said the findings do not support the routine use of MRI in children with back pain. A prospective study is needed in obese children, not necessarily with back pain, to determine the longitudinal effects of obesity and whether lumbar disease is as common in adolescents as it is in adults. The investigators disclosed no relevant conflicts of interest. ■

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