IV bisphosphonate Tx linked to drop in bone turnover in DMD

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(HealthDay)—For patients with Duchenne muscular dystrophy (DMD), intravenous bisphosphonate therapy is associated with declines in bone turnover, according to a study published online Nov. 28 in the *Journal of Bone and Mineral Research*.

Barbara M. Misof, Ph.D., from the Ludwig Boltzmann Institute of Osteologie in Vienna, and colleagues characterized the effects of glucocorticoid therapy and bisphosphonate treatment (used to stabilize vertebrae and reduce back pain in a cohort with vertebral fractures) on bone tissue and material properties in paired trans-iliac biopsy samples from nine boys with DMD, compared with reference values.

The researchers found that the boys had low cancellous bone volume (BV/TV) and cortical thickness before intravenous bisphosphonate, as

well as mineralizing surface in the lower normal range. BV/TV and cortical thickness were unchanged on average after intravenous bisphosphonate. At the individual patient level, BV/TV Z-scores increased, remained unchanged, and decreased in two, four, and three patients, respectively. On average, there was a significant decrease in mineralizing surface; an increase was seen in cancellous compartments, while decreases versus baseline were seen in the heterogeneity of cancellous and cortical bone mineralization.

"Our observations point to the need for novel therapies with less or absent bone turnover suppression, including the fact that bone turnover was low even before bisphosphonate therapy, that bone turnover declined further (as expected) with treatment, and that declines in trabecular bone volume were observed in some boys despite bisphosphonate therapy," the authors write.

One author disclosed financial ties to Novartis Pharmaceuticals.

More information: Abstract
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