Small for gestational age (SGA) children are at increased risk of metabolic syndrome in adulthood and have below-average bone mineral density (BMD). Growth hormone treatment reduces fat mass and insulin sensitivity, increases lean body mass and improves height and BMD in short SGA children. The present study aimed to evaluate changes in body composition in SGA patients treated with growth hormone (GH), after its cessation, compared with young adults born appropriate for gestational age (AGA).

METHODS

A longitudinal study was performed of twenty-one SGA patients without catch-up growth and previously treated with growth hormone. Individuals were followed up from the start for when growth hormone treatment was discontinued. Children's body composition variables (BMD in femoral neck, in lumbar vertebrae, fat and lean body mass proportion) were evaluated annually with dual-energy X-ray absorptiometry (HOLOGIC 2003-ExplorerTM) and after treatment completion and final height. Data was compared with untreated age and sex matched controls.

RESULTS

Once treatment is discontinued, fat mass, lean mass and bone mineral density in femoral neck show no significant differences compared to those of matched controls. BMD in lumbar vertebrae was higher in SGA patients compare to controls, indicating that long-term growth hormone treatment in SGA children has no unfavourable effects on metabolic health after cessation treatment.

REFERENCES/BIBLIOGRAPHY


CONCLUSIONS