

**CALCITONIN TREATMENT OF OSTEOPOROSIS IN PEDIATRIC LONG-TERM CARE: II. Audrius V. Plioplys, Irene Kasnicka, Chicago, Illinois**

**Introduction** The beneficial effect of calcitonin on cerebral palsy disuse osteoporosis was first reported at last year's AMDA meeting. This report extends our observations from 6 cases to 15.

**Methods** 15 individuals who had a fracture were identified (age range 9-30 y; mean 19 y; 7 females, 8 males). All had quadriplegic cerebral palsy and 13 were fed by gastrostomy tube. All were receiving adequate amounts of calcium and vitamin D. Serum calcium and vitamin D levels were normal. None had received any steroid treatments. Each was treated with one calcitonin nasal spray (=200 units), 5 times per week, 3 months of treatment alternating with one month of no treatment. All underwent bone mineral density (BMD) determinations using a Hologic QDR-1000 X-ray Bone Densitometer (DXA) before and after one and two years of treatment. 7 were treated for 1 year, and 8 for 2 years.

**Results** After calcitonin treatment, BMD determination changes were determined in the lumbar spine in 11 cases, in the hip in 8.

There was greater improvement in males. In the lumbar spine, 80% of males improved an average of 14% (33% of females improved 2%). In the hip, 80% of males improved an average of 12% (33% females improved 1%).

There was a greater improvement in those less than 20 years of age. In the lumbar spine, the average improvement for those less than 20 was 10%, whereas that over 20 was 0%. For the hip, the average improvement was 14%, and in those over 20, there was a decrease of 2%.

**Conclusion** These results indicate that calcitonin may be an effective treatment of cerebral palsy disuse osteoporosis and that better responses may occur in males and in younger individuals.

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