

Frequency of Scoliosis In Cervical Dystonia Patients and Their Relatives

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Previous reports have suggested families with multiple members with cervical dystonia (CD) have likewise apparent increased rates of scoliosis (Duane DD, Adv Neurol, 1998). Transcranial magnetic stimulation findings of those with idiopathic scoliosis are similar to those observed in idiopathic dystonia (Domenech J, et al, Neurology, 1997). This report is of 296 patients with CD evaluated between 8/87 and 12/97; 207 or 70% female, mean age of CD onset 43 years, mean duration of symptoms 9.8 years. 287 had x-rays of the entire spine at initial evaluation. Scoliosis was defined as more than 10° thoracolumbar curve. All patients were directly questioned about relatives with tremor, dystonia, scoliosis, and parkinsonism, as well as personal prior history of scoliosis. Results were contrasted with 150 spine pain controls, 103 (68%) female, mean age 49 years. The reported frequency of adolescent idiopathic scoliosis is 1.7%; female to male ratio 2:1.

Results: Personal antecedent history scoliosis (Fischer's Exact Test): CD 35 (12%), control 3 (2%), $p < 0.001$. Sibs with history of scoliosis: CD 21 (7%), control 2 (1%), $p 0.005$. Offspring with history of scoliosis: CD 32 (11%), control 4 (2%), $p 0.001$. Both offspring and sib with history of scoliosis: CD 16 (5.5%), control 0, $p 0.001$. Observed thoracolumbar scoliosis: CD 45 (16.5%), control 5 (3%), $p 0.001$ (Chi-square). These observations reaffirm that scoliosis is under genetic influence and may be linked to the occurrence of cervical dystonia, perhaps as a forme fruste of a genetic dystonic predisposition.

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