Alterations of the thoracic spine in Marfan's syndrome

Bernd F Daeubler, Thierry Carrel, Tomasz Kujawski, Aurelia Schnyder, Pia Zurmühle, Peter Vock & Suzanne E Anderson

OBJECTIVE: The purpose of this study was to determine if the thoracic vertebral elements are altered in patients with Marfan's syndrome. MATERIALS AND METHODS: Thirty patients underwent helical CT of the thorax because of suspected thoracic aortic dilatation and acute dissection. Thirteen had Marfan's syndrome and 17 did not. Two reviewers, unaware of the final diagnosis, evaluated the images by consensus for laminar thickness, foraminal width, dural sac ratios, and vertebral scalloping for T2-T12. RESULTS: At T9-T12, dural sac ratios at the midcorpus level (p = 0.031) and foraminal width (p = 0.0124) were significantly greater in the patients with Marfan's syndrome than in the patients without. Dural sac ratios at lower endplate levels (p = 0.0685), laminar thickness (p = 0.951), and vertebral scalloping (p = 0.24) were not significantly greater in the patients with Marfan's syndrome than in the patients without. CONCLUSION: Because the phenotypic expression of Marfan's syndrome is variable, information on the spine from thoracic studies in combination with major criteria may be helpful clinically.