Diffuse Idiopathic Skeletal Hyperostosis: Isolated Involvement of Cervical Spine in a Young Patient

REUVEN MADER, MD, Head, Rheumatic Diseases Unit, Ha'Emek Medical Center, Afula, and The B. Rappaport Faculty of Medicine, The Technion, Haifa, Israel. Address reprint requests to Dr. R. Mader, Rheumatic Diseases Unit, Ha'Emek Medical Center, Afula 18101, Israel. E-mail: Mader_r@clalit.org.il

Involvement of the cervical spine (C-spine), detected by radiographs or at post mortem examinations, is reported to occur in up to 76% of patients with diffuse idiopathic skeletal hyperostosis (DISH)[1,2]. Clinical manifestations of DISH in the C-spine were recently reviewed[3]. Isolated C-spine involvement has not yet been described.

A 36-year-old man was referred to our outpatient clinic for evaluation of neck pain of one year duration. Musculoskeletal examination showed mildly reduced range of motion of the neck in all planes. Tenderness was elicited over the posterior and lateral aspects of the neck. Peripheral joint examination was normal. Radiographs of the C-spine showed wedge shaped nuclei of ossification in the anterior aspect of C4–C5 and C5–C6 intervertebral spaces. Faint vertical ossifications were noted at C2–C3, C3–C4, and C6–C7 levels (Figure 1A). Radiographs of the thoracic spine, pelvis, knees, and hands showed no abnormalities or intraarticular calcifications. Over nearly 7 years of followup there was gradual increase in the ossification process of the anterior longitudinal ligament, which resulted in complete fusion of C4 to C7 vertebrae (Figure 1). Radiographs of thoracic spine showed only small single bridging osteophyte formation (Figure 2).

It is suggested that DISH may affect young individuals and have atypical variants that deserve further exploration. It is estimated that a period of at least 10 years is needed for the pathologic process to evolve completely. Better understanding of the initial pathologic process and early interventions might prove useful in halting the progression of DISH.

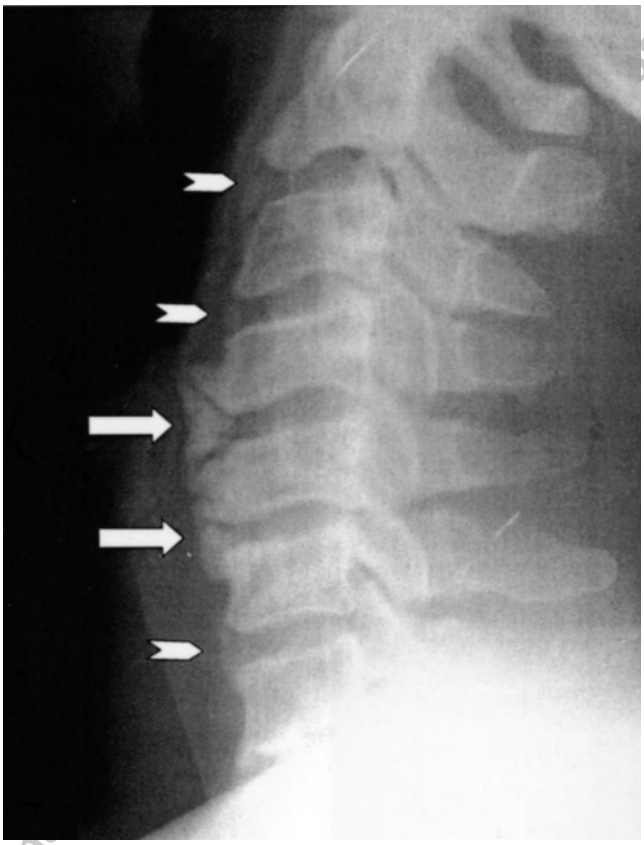

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Figure 1. A. C-spine radiograph taken in 1996, when the patient was first examined. Nuclei of ossification in the anterior aspect of C4–C5 and C5–C6 (large arrows), at the level of the intervertebral disc. Faint vertical ossifications were noted at C2–C3, C3–C4, and C6–C7 levels (small arrows). B. Radiograph taken in 1999, showing increase in the densities and size of these findings. C. Radiograph in 2003 shows anterior fusion of C4–C7.

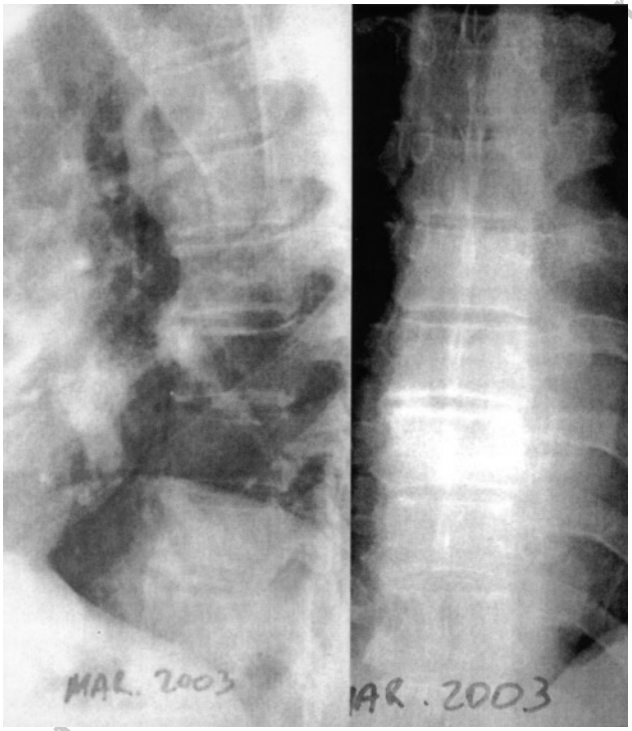

Figure 2. Radiograph in 2003 shows small single bridging osteophyte of the thoracic spine.

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