2016

A retrospective review of patients known to have AS or DISH treated for spinal column fracture at a single institution between 1995 and 2011 was performed. Patients were analyzed by the type of fixation, divided into either a percutaneous group (PG) or an open group (OG). There were 41 patients identified with a spinal column fracture and history of AS or DISH who received surgical intervention. There were 17 (42%) patients with AS and 24 (58%) with DISH. Patients in the PG and OG cohorts presented with similar mechanisms of injury, Injury Severity Scale, number of vertebral fractures, number of additional injuries, and Arbeitsgemeinschaft für Osteosynthesefragen (AO) classification scores. Mean operative time (254.76minutes versus 334.67minutes, p=0.040), estimated blood loss (166.8 versus 1240.36mL, p<0.001), blood transfusion volume (178.32 versus 848.69mL, p<0.001), and time to discharge (9.58 days versus 16.73 days, p=0.008) were significantly less in the PG cohort. The rate of blood transfusion (36% versus 87.5%, p=0.001) and complications (56% versus 87%, p=0.045) were significantly less in the PG cohort. Percutaneous stabilization of fractures in patients with AS or DISH was associated with lower blood loss, shorter operative times and decreased need for transfusion, shorter hospitalization time and a lower perioperative complication rate [1)].

2001

Sharma et al. report the results of a retrospective analysis of 74 cases of DISH. Eleven patients presented with progressive spinal cord or cauda equina compression. In nine cases ossified posterior longitudinal ligament (OPLL) and in two cases ossified ligamentum flavum (OLF) were primarily responsible. Surgically treated patients (eight) had far better outcome as compared to the patients managed conservatively, as they had refused surgery. 'DISH' is neither a benign condition, nor it always runs a innocuous clinical course. In fact, in about 15% of the cases, serious neurological manifestations occur, which may require a major neurosurgical intervention [2)].

1989

Retrospective evaluation of the osseous pelvis in 93 patients with severe diffuse idiopathic skeletal hyperostosis (DISH) revealed 14 locations of radiographic abnormalities. Two osteoradiologists independently studied these sites for abnormalities in a prospective, blinded fashion in 103 patients over the age of 45 years. Lateral radiographs of the thoracolumbar spine were quantitatively and qualitatively evaluated to determine whether DISH, spondylosis deformans, or a normal spine was present. Statistical analysis was performed for evaluation of interobserver reliability, the relationship between pelvic and spinal abnormalities, and the significance and predictive values of pelvic abnormalities for DISH versus non-DISH and DISH versus spondylosis deformans. Although significantly higher frequencies and greater extents of radiographic abnormalities at 10 of 14 pelvic locations were noted for DISH compared with non-DISH, this number decreased to four of 14 locations when compared with spondylosis deformans. The alterations in three of these four pelvic sites consisted of ossification of ligaments. These changes appear to be good indicators of the presence of spinal DISH and support the concept that DISH is an entity separate from spondylosis deformans [3)].

1977

Radiographs of 175 patients with diffuse idiopathic skeletal hyperostosis (DISH) of the spine or

ankylosing spondylitis were reviewed. DISH most frequently began in the middle and lower portions of the thoracic spine; it was rare in the upper portion. A few vertebrae were first affected, and then involvement extended, sometimes throughout the thoracic spine. The anterior and lateral aspects of vertebral bodies were mainly affected. Hyperostosis vertically spanning the anterior aspects of the vertebrae varied in thickness up to 10 mm, and the rate at which the hyperostosis proliferated was not specific for any vertebra. Males were 12 times more frequently affected than females, especially in the older age groups. Diabetes mellitus and hypertension have reportedly been associated with DISH, but no such correlation was found in this study. Despite the existence of criteria for differential diagnosis, it is sometimes difficult to distinguish ankylosing spondylitis from DISH radiologically. The radiologic features helpful in the differential diagnosis are described, and a review of the pertinent literature is included [4].

1)

Moussallem CD, McCutcheon BA, Clarke MJ, Cui Q, Currier BL, Yaszemski MJ, Huddleston PM, Rose PS, Freedman B, Dekutoski MB, Bydon M, Nassr A. Perioperative complications in open versus percutaneous treatment of spinal fractures in patients with an ankylosed spine. J Clin Neurosci. 2016 Aug;30:88-92. doi: 10.1016/j.jocn.2016.01.020. Epub 2016 Mar 30. PubMed PMID: 27038854.

2)

Sharma RR, Mahapatra A, Pawar SJ, Sousa J, Lad SD, Athale SD. Spinal cord and cauda equina compression in 'DISH'. Neurol India. 2001 Jun;49(2):148-52. PubMed PMID: 11447434.

3)

Haller J, Resnick D, Miller CW, Schils JP, Kerr R, Bielecki D, Sartoris DJ, Gundry CR. Diffuse idiopathic skeletal hyperostosis: diagnostic significance of radiographic abnormalities of the pelvis. Radiology. 1989 Sep;172(3):835-9. PubMed PMID: 2788894.

4)

Tsukamoto Y, Onitsuka H, Lee K. Radiologic aspects of diffuse idiopathic skeletal hyperostosis in the spine. AJR Am J Roentgenol. 1977 Nov;129(5):913-8. PubMed PMID: 410264.