



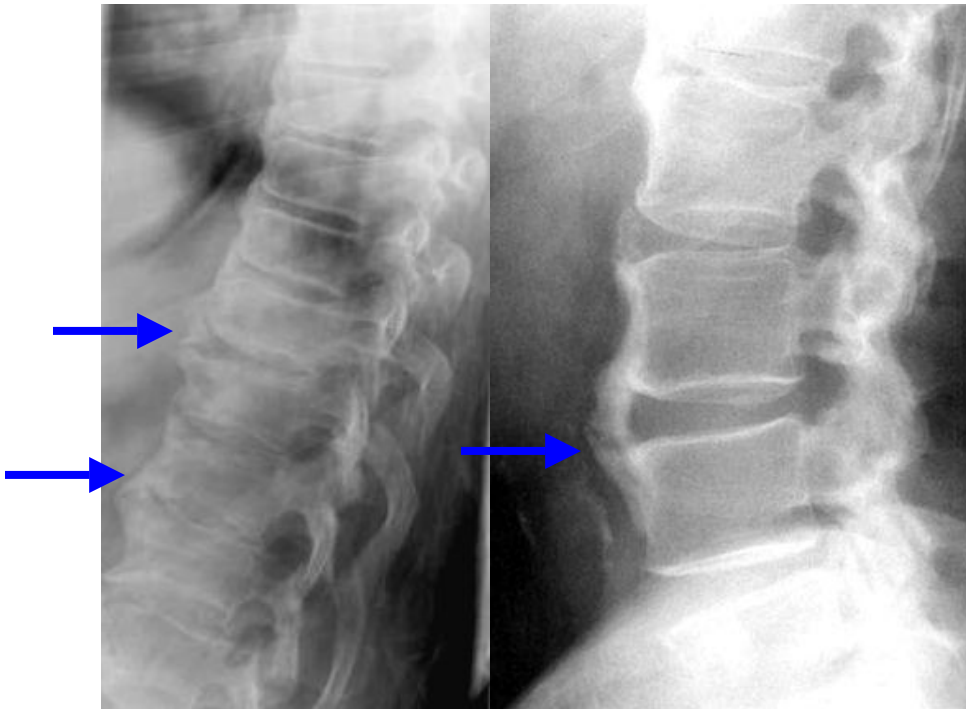
Holy C.O.W.!

It's...

Clinical Question of the Week #20
November 10th, 2008 through November
17th, 2008

Please e-mail your answers to Kuo, Tim, Wendy, and Kevin (klian@mednet.ucla.edu; tprovias@mednet.ucla.edu; wsimon@mednet.ucla.edu; kbreger@mednet.ucla.edu) by 0800 on Monday, November 17th, 2008. The resident or intern with the most correct answers at the end of each month will receive a prize!

Case: A 68-year-old right-handed man presents to the 16th Street Santa Monica Clinic to establish care after recently moving out from Palm Springs. The patient says that he got tired of all the golf and wanted to spend more time surfing. In discussing his past medical history, the patient reports hypertension well controlled on meds, chronic back and hip pain and mild stiffness, and episodic "tennis elbow." He is retired and is a veteran, having served a brief stint in Vietnam, and is the son of a German father and Pima Indian descent mother. He does not smoke and drinks occasional wine. Physical examination reveals some decreased range of motion of the spine and scattered tenderness over the epicondyles of the right greater than left elbow. When asked about his pain and stiffness, he says that the symptoms have been slowly progressive over years and he attributes it to aging, saying "Getting old sucks, right?" The patient brings radiographs from his physician, which are shown below.



Radiographs of the patient's thoracic spine (left) and lumbar spine (right).



Radiographs of the patient's right and left hips.

Questions:

1. What is the diagnosis?

Diffuse idiopathic skeletal hyperostosis (DISH), also known as ankylosing hyperostosis or Forestier's disease, is a noninflammatory condition resulting in calcification of ligaments and tendinous insertions (entheses), principally along the spinal column.

Epidemiologically, DISH is more common in men than women, with increasing incidence with age. Certain populations, such as Pima Indians and Middle Eastern Jews, have been found to have higher incidence of DISH, while African Americans may have lower incidence. DISH is also found to be more prevalent among those with metabolic syndrome, diabetics, obesity, and acromegaly.

The calcification process may occur as asymptomatic radiographic changes or may present with neck, thoracic, low back, or less commonly extremity pain including the shoulders, elbows, and knees. There is also an increased incidence of epicondylitis, knee enthesitis, and plantar fasciitis.

The hallmark of DISH is characteristic radiographic changes, including flowing linear calcification of the anterolateral aspects of the vertebral bodies (blue arrows) and, less commonly, the posterior aspect. Extra-axial findings include hip and pelvic bony proliferation (called whiskering, yellow arrow), as well as increased bony irregularity of elbows, shoulders, knees, ankles, feet, and hands, with overall increased bone density. (0.5)

2. What are two other disorders that may mimic this condition?

The differential of DISH includes spondylosis deformans (the most common mimicker of DISH, with spurs of the cervical and lumbar spine but no flowing ligamentous calcification), as well as ankylosing spondylitis (usually with more slender bony bridges of the vertebral bodies without involvement of the anterior ligament, also with SI joint involvement). (1)

3. Name two other associated symptoms.

In addition to those mentioned above, other symptoms may include dysphagia, stridor, hoarseness, aspiration pneumonia, sleep apnea, alantoaxial subluxation, cord compression/myelopathy, and thoracic outlet syndrome. Notable physical findings

include decreased range of spinal motion, pain on palpation of entheses, palpable nodules/spurs at entheses (elbow, knee, Achilles), and Heberden's nodes. (1)

4. What is the treatment?

Treatment of DISH is symptomatic, with emphasis on physical activity and physical therapy. Heat, ultrasound, and gentle exercise may reduce pain. Range of motion exercises and functional exercise programs may improve stiffness and mobility. Weight loss may be helpful. Orthotics may be used when the feet are involved. Pain is typically treated with Tylenol, NSAIDS, and when appropriate, local corticosteroid injections. Surgery is indicated in the setting of dysphagia, myelopathy, radiculopathy, thoracic outlet syndrome, and other critical anatomic impingements. (0.5)

**The syndrome is also known in Europe as Forestier-Ott syndrome, named for Jacques Forestier and V.R. Ott, who described the disease in 1950. An early investigator of lipiodol, Forestier helped pioneer to contrast agent for use in myelography, and is considered one of the fathers of French Rheumatology. The great irony in his life came when he was to present his twenty years' worth of research in the field of gold treatment in rheumatoid arthritis at the 7th international congress of rheumatology in New York in 1949, thinking it would be the seminal presentation. However, this honor went to Philip Showalter Hench, who presented his findings on the treatment of rheumatoid arthritis with cortisone, and then went on to win the Nobel Prize one year later.