

FEMALE ANKYLOSING SPONDYLITIS WITH EXTRAORDINARY PROGRESS

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SUMMARY : Ankylosing spondylitis (AS) is a disorder characterized by pain caused by inflammation of the sacroiliac joints, apophyseal joints of the spine and sometimes peripheral joints. There is also extra-articular locations and the etiology is unknown. The most common seen feature is low back pain and back stiffness. Thoracic pain is generalized. 70-80 % have low back pain and back stiffness, 25 % acute and recurrent iritis, 10-20 % peripheral joint disease, 5-10 % sciatic pain, 5-7 % cervical or thoracic pain as their initial symptoms. At first it was thought to affect mostly the male and the total spinal fusion was the common end. Recently it is observed that the female have the disease with more than the expected frequency, and the disease progression is different and more slight when compared to the male. We presented 4 extraordinary female AS in this case report.

Key Words : Ankylosing Spondylitis, Thoracic Disease, Female.

INTRODUCTION

Ankylosing spondylitis (AS) is characterized by inflammation of the sacroiliac (SIJ), apophyseal, discovertebral, costovertebral (CVJ) and atlantoaxial joints of vertebra. The cause is unknown (3, 4, 13). Once it was considered that the disease affected especially the male, and the spinal fusion was the common end (2). The reported female to male ratio varies greatly ranging from 1/4 to 1/10 and recent research showed that the AS is not predominant in the male (Female/male ratio; 1/1) (14). Gran and his coworkers reported that the disease was more frequent on the male than the female, and the female to male ratio varies between the 1/4-1/6 (5). Disease's general activity was greater among males than females (9). Most of the AS patients have back pain and back stiffness. 70-80 % have low back pain and back stiffness, 25 % have acute recur-

rent iritis, 10-20 % have peripheral joint disease, 5-10 % have sciatic buttock pain, 5-10 % have cervical pain or thoracic pain as their first symptoms. We presented 4 female patients who attended to the clinic of Physical Medicine and Rehabilitation for thoracic pain.

Case 1 : Forty-two years old female patient attended to our clinic because of thoracic and cervical pain. She had morning stiffness on thoracic area for two hours. Back pain spreaded to the anterior region of the thorax, and deep inspiration or cough aggravated this pain. She had pain for 3 years, and did not have back pain or stiffness. Six months ago she had taken non steroid anti - inflammatory drug (NSAID) for her knee pain, and one month later there was not any pain left. Her physical examination revealed cervical movements aggravating pain, and rotations were limited. There was not any pain with

lumbar range of motion (ROM), and lumbar movements were not limited. Lumbar schober was 5 cm, thoracic expansion was 0.8 cm and thoracic schober was 1 cm. There was not any arthritis signs on peripheral joints. Laboratory evaluation revealed ESR : 35 mm/h, CRP : 24 mg, HLA - B27 : (+). Two sided plain lumbosacral and thoracic (TSPLT) x-ray showed apophyseal joints to be free; there was not any sclerosis or syndesmophytes. Bilateral SIJ had sclerosis and there was roughing on the joint surfaces. SIJ computerized axial tomography (CAT) showed that there was roughing and cortical sclerosis in bilateral SIJ and joint space was minimally narrowed (Fig 1). We have taken CVJ CAT to demonstrate pathologic changes on thoracic joints. Costovertebral joint (CTJ) spaces were narrowed and there was fusion, erosions, bone proliferation and significant sclerosis on the vertebral side (Fig 2). The pathologic signs were impressive on the CVJ. Bone scan (BS) showed that there was a block like activity on the thoracic vertebra, in bilateral symmetric SIJ, and in the left knee. Respiratory functional tests and eye examination were normal. She was treated with Salazopyrin - EN tablet and Indocid R capsules.

Case 2 : Female, 18 years old. She was admitted to our clinic with back pain and stiffness. In her physical examination the cervical ROM was not limited, and she did not have any pain. Her lumbar lateral flexion and rotation were not limited, but she had pain. Lumbar schober was 4 cm, thoracic expansion was 1.8 cm. There wasn't any arthritis sign of peripheral joints. Laboratory evaluation revealed ESR : 70 mm/h, CRP : 24 mg/L, HLA-B27 (+).

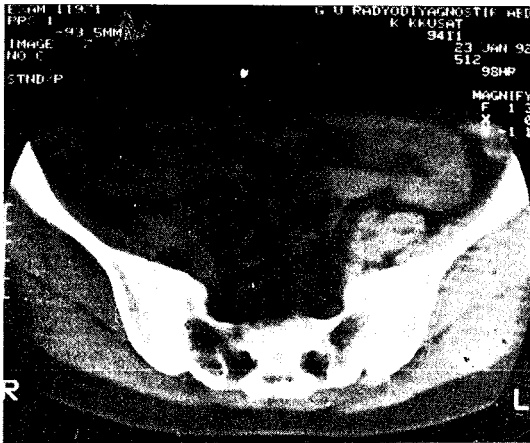


Fig - 1 : Sacroiliac joint's computerized axial tomography.

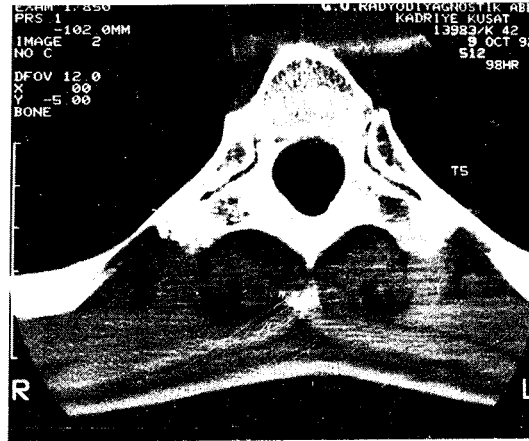


Fig - 2 : Costovertebral joint's computerized axial tomography.

TSPLT x-ray showed sclerosis on bilateral SIJ and on the iliac bone. Apophyseal joints were free and there was not any sclerosis or syndesmophytes. SIJ CAT showed that there was important sclerosis on the two sides of the iliac bone. The iliac sides of the joints were rough and the joint space was narrowed. Sacral bone was normal. In the CVJ CAT we saw right T10 CVJ had bridged bone proliferation. In the BS the vertebral and costal joining regions had high activity and irregularity. Bilateral SIJ had symmetric high activity. Respiratory functional tests and eye examination were normal. Salazopyrin EN and Indocid R had been given.

Case 3 : Female, 43 years old. She had attended to our clinic because of right shoulder and back pain. She had back stiffness. Ten years ago she had high fever, and pain on the ankles, elbows and fingers. She did not have any morning stiffness. Laboratory tests revealed; ASO 800 IU, ESR 110 mm/h. She used chloroquine tablet, Ultralan tablet and Penadur LA for 2 years, and after that, she was symptom free. Four years ago pain initially on the back and then low back pain started. Pain increased at night, and decreased in the morning. She had thoracolumbar morning stiffness for an hour and she used NSAID. Her physical examination showed that her right shoulder movements were limited and the skin temperature in that area was raised. Her cervical ROM were limited also. Lumbar ROM were free, but there was pain. Lumbar schober was 4 cm, thoracic expansion was 1.5 cm. Laboratory evaluation revealed: ESR 80 mm/h, CRP 10 mg/L, HLAB27 : (-). In the TSPLT x-ray the apophyseal joints were free, and there was not any syndes-

mophytes. Bilateral SIJ had irregularity and narrowing. Two sided plain cervical x-ray showed cervical anterior ligament calcification. In the SIJ CAT there was bilateral irregularity and progressed narrowing. In the CVJ CAT there were bone proliferation, erosion and sclerosis on the adjacent portions of the CVJ. Also there were expanded joints spaces. Bone scan of the processes of the T9-10-11-12 and L2-3-4 vertebral body had shown irregular activity. Respiratory function tests were normal. She had allergic conjunctivitis on eye examination. She was treated with Salazopyrin EN, Voltaren tablet.

Case 4 : Female, age 38. She had attended to our clinic with back-pain for 7 years. Back pain spreaded to the anterior thoracal and lumbar region. Deep inspiration and coughing aggravated the pain. She had morning stiffness for 15 minutes. There was low back pain with limitation of the movements. Lumbar schober was 4 cm, thorax expansion was 2 cm. There were not any arthritis signs on the peripheral joints. Laboratory evaluation showed that ESR was 29 mm/h, CRP : (-). TSPLT x-ray showed that the apophyseal joints were normal, and there wasn't any sclerosis or syndesmophytes. Bilateral SIJ had irregularity and sclerosis, which was prominent on the iliac wings. In the SIJ CAT there was irregularity and sclerosis on the joint surface of the proximal end of the SIJ, and this was more marked on the iliac wings. In the CVJ CAT there was bone proliferation in the CVJ, and erosions on the bone surface. At the level of T9 there was irregular bone proliferation and bridging on the right CVJ. Respiratory functional tests and eye examination were normal. She was treated with Salozopyrin EN tablet.

DISCUSSION

AS is an inflammatory disorder which affects synovial and cartilaginous joints. Mostly the axial skeleton is involved, although significant changes may also occur in the appendicular skeleton (1, 2, 3, 7, 8, 13). Typically 70 to 80 % of the patients are presented with low back pain and stiffness (3). Sciatic, buttock, back, cervical pain, peripheral joint involvement and, recurrent iritis may be the first signs of the disease (3, 6). Chest pain is mostly related to the pleuritis or thoracic joints inflammation (thoracic vertebra, CVJ, and CTJ) (3). Spinal involvement in AS occurs mostly at the discovertebral, apophyseal, CVJ, and atlantoaxial joints. CVJ and CTJ changes include erosion, sclerosis and eventually ankylosis (3, 13). AS in female is different and

flue. However cervical vertebra (9, 12), peripheral joint involvement (9, 10, 12), recurrent uveitis and anemia (12) are seen more in female when compared to male. According to Maldonado-Cocco and his coworkers when the peripheral joint involvement was the first sign, there was not any difference between male and female patients. Initiation with cervical vertebra involvement is frequent in adult female patients (11). Gran and his coworkers reported 7 patients with typical AS signs on lumbar vertebra, but there were not any sacroileitis. These patients were overall of AS with a prevalence 0.37 %, and it is a variant and light form of primary or marked AS (6). Levitin and his coworkers has reported lumbosacral pain as the first sign of 33 percent of the women with AS. According to their report, radiological involvement of the vertebral joints occurred less at the female, but the effect of the disease were similar on both sexes. Initiation with spinal nerve root or peripheral joint involvement is more frequent than the lumbosacral pain (10).

We presented 4 female patients with prominent thoracal pain and stiffness. X-ray showed bilateral sacroileitis, but there was not any pathological sign of the AS on the lumbar vertebra. There was sclerosis, erosion, bone proliferation, stepped fusion in the CVJ and CTJ. One patient had pain and stiffness of the shoulder joint. In the ultrasonography there was effusion in the shoulder joint. BS showed increased activity on the lumbar vertebra, but there was not any complaint on the shoulder region.

All these signs demonstrate that sex difference may affect vertebral involvement and the evaluation of the AS.

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