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Case Report

Rheumatoid Arthritis and Ankylosing Spondylitis Occurring Together- A Case Report

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Abstract

We report a case of middle aged man who presented with inflammatory low back pain with restriction of movement and enthesopathy. Later on the developed inflammatory pain affecting small and large joints of upper and lower limbs associated with morning stiffness with deformities. There is also positive family history. So, though the incidence is very rare the co-existence of rheumatoid arthritis and ankylosing spondylitis in this case would be a possibility.

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Introduction

Rheumatoid arthritis and ankylosing spondylitis is sometimes difficult to differentiate, though it is important to do so as the natural history and treatment of the two conditions differ[1]. Diagnostic differences may occasionally arise when the sign and symptoms of the one overlap those of the others or, more rarely, when both entities coexist the same patient. The characteristic feature of rheumatoid arthritis is persistent inflammatory synovitis; usually involving the peripheral joints is a symmetric distribution [2]. Ankylosing spondylitis is a separate disease is diagnosed by radiological evidence of bilateral sacroiliitis and spinal restriction w ith or without asymmetric peripheral large joint involvement.

Nonetheless, some practical difficulties do exist as upto half the patients with ankylosing spondylitis have peripheral joint involvement during their disease and the spine may be more or less spared [3]. It has been claimed also that about 30% of patients with rheumatoid arthritis may have sacroiliitis, often bilateral[4].

An association between HLA-27 and ankylosing spondylitis in >95% of cases, this antigen being found in only 6% of the normal population and 9% of a typical rheumatoid population, was an important observation[4.] In clinical practice diagnostic problems usually arise in two types of patient: those with a peripheral polyarthritis who also have bilateral sacroiliitis and a positive latex test result, and those with spondylitis and also an extensive peripheral polyarthritis.

Rheumatoid arthritis is a common inflammatory articular disease[6]; it affects about 1% of adult population worldwide[7]. Ankylosing spondylitis occurs in 1 in 500 to 1 in2000 [7,8]. So, assuming the two diseases are independent of each other, the chance of this association in the same person is about 1 in 50000 to 1 in 200000.

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Case Report

The patient named Md. Mozammel Hoque aged 42 years, married Muslim, hailing from Rajpara, Rajshahi, has been suffering from chronic low back pain since 1985. Then gradually his upper back, neck and became stiff with restriction of movement. For the last 10 years he has been suffering from peripheral arthritis involving the small joints of hands and feet, both shoulders, wrists, knees, ankles with significant morning stiffness. His younger brother also has been suffering from similar illness. He is non smoker and there is no history of exposure, diarrhea, and dysentery, redness of eyes and skin lesions preceding or during his illness.

On examination he is moderately anemic, pulse - 84/min, B.P.-110/70 mm of Hg, was found to have been no nodules but deformities in spine including hyperextension of neck, exaggerated thoracic kyphosis, and loss of lumber lordosis. Tenderness is present over thoracic and lumber spine; movement is painful and restricted in all directions. Schober's test- positive (expansion <2cm), planter fasciitis also present. He also has polyarthritis affecting proximal interphalangeal joints, metacarpophalangeal joints, wrists, metatarsophalangeal joints, and knees with Thumb- 'Z' deformity with radial deviation of wrist and ulnar deviation of digits, middle finger-boutonniere deformity.

On investigation, Urine R/M/E- normal, Hb-5.7 gm/dl, ESR-130 mm in the 1st hour, CRP- 48 mg/l, RA Test-negative, ANF-negative, SGPT- 25 u/l, X-ray- L/S spine (A/P and Lateral view) revels

Fusion of sacro-iliac joints on both sides, some syndesmophytes with osteopenia, X-ray hand (A/P and Lateral view) - there are periarticular osteopenia and joint space narrowing in the proximal interphalangeal joints, Chest x-ray (P/A view)-normal, Spirometry - mild restrictive lung disease.

Discussion

Ankylosing spondilitis and Rheumatoid arthritis are readily differentiated in most cases on the basis of characteristic clinical, laboratory, and radiographic manifestations. Briefly, the arthritis of ankylosing spondylitis is characterized by genetic predispodition[9] earlier onset, male predominance and axial distribution[10]. The radiographic finding of bilaterally fused sacroiliac joints with a bamboo spine is virtually pathgnomic. In contrast RA has no genetic susceptibility,[5] a later onset, female predominance, and a peripheral distribution[11]. The radiographic hallmarks of RA periarticular demineralization, symmetrical joint space narrowing and marginal articular erosions; these abnormalities are classically distributed in mirror image symmetrical pattern[12]. An extremely useful clinical point of distinction between the two diseases is absence of rheumatoid nodules in ankylosing spondylitis[13, 14]. Although HLA –B27 and RA factor provide sensitive disease markers but these are non-specific and they may be present in apparently normal individuals and in other disease states[15-19]

Atypical varieties of rheumatoid arthritis and ankylosing spondylitis may create diagnostic confusion; sacroiliitis complicates rheumatoid arthritis in 20% of patients [20-21] and a peripheral arthropathy is present in 50% of spondylitis[22]. Radiography is especially useful in such atypical cases, since subtle, but distinctive differences exist between the two entities in their appearances and distribution. Thus, a chronic, erosive peripheral arthritis is rarely seen with ankylosing spondylitis. Sacroiliitis is rarely initial manifestation of rheumatoid arthritis, and lumber involvement eventuating in extensive ankylosis is distinctly unusual[23].

On the basis of prevalence rates of rheumatoid arthritis and ankylosing spondylitis in the general population, such an association has been conservately estimated to occur in 1:100,000 person but actual prevalence is more and this is not mere association.

An accurate diagnosis is therefore possible when the characteristic changes of both diseases are present along with the investigation. Our case satisfies diagnostic criteria if both the diseases. Although very rare yet we may encounter such a case seldomly in our clinical practice. Though in this case HLA-B27 could not be done due to lack of facilities.

References

1. G.H. Fallet, M. Mason, H. Berry, A G Mowat et al. Rheumatoid arthriyis and ankylosing spondylitis occuring together , *British Medical Journal* 1976;1: 804-07.
2. Pincus T, Long term outcome in rheumatoid arthritis, *Br. J Rheu* 1995 ;34 :59-73.
3. Wright. V, and Moll, JMH, *British journal of hospital Medicine* 1973; 9:331.
4. Ott .VR, Schmidy K, and Herberholz G, in Gongresso European de Rheumatologia,168. Lisbos, institute portegue de Rheumatologia 1967
5. Ali ML , Alam MN , Haq SA, Das KK, Baral PK, Efficacy of methotrexate in Rheumatoid arthritis. Bangladesh Medical Res Council B 11 .1997; 23(3): 2-6.
6. Etrapolations of prevalence and incidence statistics for Rheumatoid arthrtis ,2007[online] [Accessed 2nd December 2008] Available: http://www.Current research, com/r/ Rheumatoid arthritis /stats=contry .htm.
7. Blecourt, J J de, Polman, A, Blecourt–Meindensm, I de, *Annals of the Rheumatic Diseases* 1961;20:215.
8. West, HF, *Annals of the Rheumatic Diseases* 1949; 8; 143.
9. Emery AEH, Lawrence JS. Genetics of ankylosing spondylitis. *J MED Genet* 1967; 4:239-244.
10. Copeman WSC. In: ScottJT, ed. *Copeman's textbook of the rheumatic diseases*. Edinburgh: Churchill Livingstone. 1978.
11. Meyorwitz S, Jacox RF, Hess DW. Monozygotic twins discordant for rheumtiod arthritis; a genetic, clinical and psychological study fo 8 sets. *Arthritis Rheumatism* 1968; 11: 1-21.
12. Bywaters EGL. The early radiological signs of rheumatoid arthritis. *Bull Rheum Dis* 1960; 11:231-232.
13. Simpson NRW, Stevenson CJ. Analysis of 200 cases of ankylosing spondilitis. *Br Med J* 1949; 1:214-216.
14. Forbech V. Do mutual features really dominate separating features in rheumatoid arthritis and rheumatoid spondilitis? *Acta Med Scand* 1958; 162:43-46.
15. Waller M, Toone EC, Vaughan E. Study of rheumatoid factor in a normal population. *Arthritis Rheum* 1984; 7:513-520.
16. Bartfield H,Distribution of rheumatoid factory activity in non-rheuamtoid states. *Ann NY Acad Sci* 1969; 168:30-40.
17. Cohen LM, Mittal KM, Schmid FR. Increased risk for spondylitis stigmata in apparently healthy HA-AW27 men. *Ann Intern Med* 1976; 84:1-7.
18. Brewerton on DA, Nichollas A, Caffery M, Walters D. HL- A27 and arthropaties associated with ulcerative colitis and psoriasis. *Lancet* 1974; 1:956-958.
19. Brewerton DA Nicollas A, Caffrey M, oates JK, Waltes D, James DCO. Reiter's disease and HL-A27. *Lancet* 1973; 2; 996-998.
20. Martel W, Duff I. Pelvo-spondilitis in rheumatoid arthritis. Radiology 1961; 77:754-756.
21. Dixon AS, Lience E, Sacro-illiac joint in adult rheumatoid arthritis and psoriatic arthropathy. *Ann Rheum dis* 1961; 20:247-257.
22. Polley H. The diagnosis and treatment of rheumatoid spondylitis. *Med Clin North Am* 1955; 39:509-528.
23. Dilsen N, McEwen C, Poppel M, Gersh WJ, Ditata D, Carmel D. A comparative roentgenologic study of rheumatoid arthritis and rheumatoid (ankylosing) spondylitis. *Arthritis Rheum* 1962; 5:341-368.

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