

RHEUMATOID ARTHRITIS IN EAST IRAN CLINICAL AND SEROLOGICAL OBSERVATION OF 76 CASES

R. FARID AND G. A. NASEH

From the Clinical Immunology Department, Ghaem Medical School, Mashhad University of Medical Sciences, Mashhad, Islamic Republic of Iran.

ABSTRACT

Rheumatoid arthritis is not a rare condition in east Iran. We have compiled a study of 76 patients with classic and definite RA in the Rheumatology Department of Ghaem Medical School in east Iran. All patients were admitted for clinical and serological evaluation.

In terms of sex ratio, pattern of joint involvement, severity and nodularity, RA in east Iran did not resemble that which has been reported from the U.S. or European countries.

Articular deformities and disability are rare and there was a striking absence of systemic non-articular complications of rheumatoid arthritis. Only a few patients showed rheumatoid lung disease. The severity of the radiological findings were mild in comparison to the results of Thould and Simon's report.¹³

INTRODUCTION

Rheumatoid arthritis (RA) is a disease which is more common in developed countries and its epidemiological features, natural history and clinical manifestations have been well defined by numerous studies in the United States and Great Britain.^{1,4}

Our experience indicates that RA is by no means rare in Iran either, but in terms of sex prevalence, pattern of joint involvement, disability, joint deformity, and extra-articular manifestations, it does not resemble that of patients described in western countries.⁵ RA in east Iran is generally milder, less extensive and associated with less extra-articular complications.

PATIENTS AND METHODS

Between 1980 and 1982, 76 patients with RA were seen at the Rheumatology Department, Mashhad University in east Iran. The diagnosis was based on the criteria of the American Rheumatism Association.⁶ Laboratory evaluation consisting of hemoglobin levels, erythrocyte sedimentation rate,

Table I. Clinical data on 76 patients with classic or definite R. A.

| | male | female | total |
|-----------------|------|--------|-------|
| Classic RA | 10 | 43 | 53 |
| Definite RA | 7 | 16 | 23 |
| Mean Age(years) | 40 | 33 | |
| Sexratio(M / F) | 1:3 | | |

Table II. Prominent symptoms of 76 patients with RA.

| Symptoms | male | female |
|-------------------|------|--------|
| Morning stiffness | 82% | 100% |
| Polyarthralgia | 100% | 100% |
| Joint swelling | 100% | 94% |
| Fatigue | 18% | 40% |
| Weight loss | 10% | 32% |
| Disability | None | 3.3% |

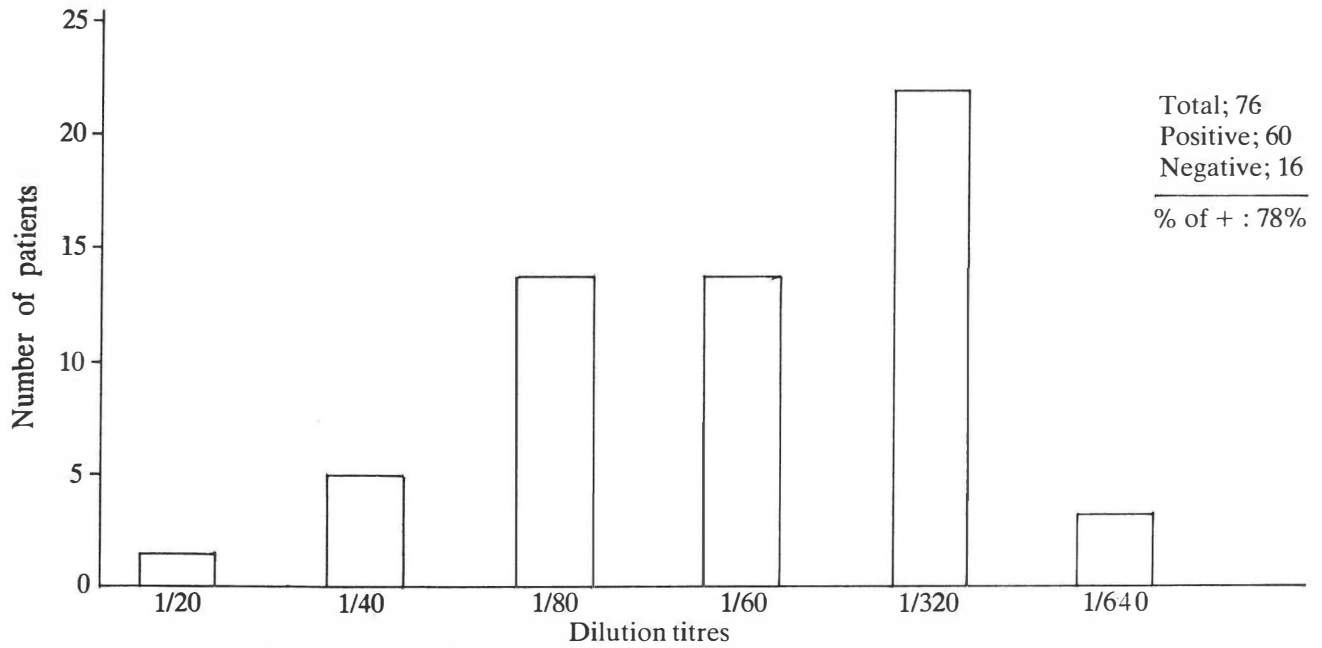


Figure 1. Number of patients and serum titres of RF-positive RA patients in the east Iran study.

Table III. Sites of joint involvement in 76 patients with RA.

| Joints | Percentage of Cases |
|----------|---------------------|
| PIP | 63% |
| MCP | 36% |
| WRIST | 34% |
| KNEE | 2.6% |
| ANKLE | 2.6% |
| ELBOW | 1.7% |
| SHOULDER | 1.3% |

rheumatoid factor and roentgenograms were requested. Functional capability of the patients was assessed by the criteria of Duthie, et al⁷ and in 58 patients, the severity of the radiological changes was graded according to the criteria of Kellegren, et al.⁸ Sera from the 76 patients were tested for white blood counts, erythrocyte sedimentation rate, hemoglobin, hematocrit, and latex fixation tests for rheumatoid factor.

RESULTS

There were 23 men (30%) and 53 women (70%) in this study, and the usual female predominance was observed. 53 patients fulfilled the American Rheumatism Association's criteria for classic RA, and 23 for definite RA (table I).

The mean age of onset was 33 years in the female group and 40 years in the male group. The mean duration of the disease was five years.

The prominent symptoms and sites of joint in-

Table IV. Joints involved in RA in the United States.

| Joints | Percentage of cases |
|----------|---------------------|
| MCP | 87 |
| WRIST | 82 |
| PIP | 63 |
| MTP | 48 |
| SHOULDER | 47 |
| KNEE | 56 |
| ANKLE | 53 |
| ELBOW | 21 |

(Data adopted from Kelley, Textbook of Rheumatology, Philadelphia. W.B. Saunders, 1985.)

volvement are shown in tables II and III. The site of joint involvement in classic RA in the United States is shown in table IV.

The radiological changes in those patients in whom the radiographs were graded according to the criteria proposed by Kellegren, et al⁸ in comparison to 105 British patients with RA is shown in table V.

The articular deformities and a comparison of the extra-articular complications of Iranian RA patients with Gordon, et al's report on 127 cases of RA⁹ are shown in tables VI and VIII respectively.

Serological Findings

Sera from 76 patients were collected for routine laboratory evaluation and latex fixation test (agglutination technique) for rheumatoid factor using standard RA serum for positive control. The results are shown in figure 1.

Table V. Radiological findings in 76 Iranian and 105 British patients with RA.

| Grade | Iranian | British ² |
|-------|---------|----------------------|
| 0-1 | 53% | 17% |
| 2 | 32% | 36% |
| 3 | 10% | 32% |
| 4 | 5% | 15% |
| Total | 100% | 100% |

1. Graded according to Kellegran et al (1983).
2. Data from Thould and Simon,(1966).

Table VI. Articular deformities of 76 Iranian patients with RA.

| Deformity | Number | Percentage |
|---------------------------|--------|------------|
| Fusiform swelling | 46 | 60 |
| "Swan neck" | 8 | 10 |
| Ulnar deviation | 7 | 9 |
| Boutonniere deformity | 3 | 3.6 |
| Baker cyst | 2 | 2.6 |
| Flexion contracture | 2 | 2.6 |
| Elbow knee | -- | -- |
| Hill and valley deformity | 2 | 2.6 |
| Extensor palsy | -- | -- |

Table VII. Extra-articular complications of 76 Iranian RA patients compared with western reports.

| Complication | Iranian | |
|---|--------------|--------|
| Rheumatoid lung disease (PE,IPF) ² | 6 (7.8%) | 20-40% |
| Rheumatoid nodules | 4 (5.2%) | 20-35% |
| Vasculitis | 3 (3.9%) | 15% |
| Splenomegaly | 1 (1.3%) | 10% |
| Keratoconjunctivitis sicca | — | 25% |
| Pericarditis | — | 9% |
| Total | 19.5% | 76% |

1. Data from Kelley, et al: Textbook of Rheumatology, Philadelphia, W.B. Saunders, 1985.
2. PE: Pleural effusion, IPE interstitial pulmonary fibrosis by pulmonary function tests and transbronchial biopsy.

DISCUSSION

Rheumatoid arthritis is not rare condition in the east of Iran. We have observed 76 patient with classical and definit RA in rheumatology department in Ghaem Med. School east Iran. All patient were admitted for clinical and serological evaluation.

In term of sex ratio, pattern of joint involvement, severity and nodularity RA in the east of Iran they were not similar to those patient who had been reported from U.S. or European countries.

Articular deformities and disability was rare (table 6) but there was striking absence of the systemic non articular complications of RA only a few of the patients showed rheumatoid lung disease (table 7) The severity of radiological finding compared with Thould and Simon report¹³ is mild.

REFERENCES

1. Abrizzo JL: Rheumatoid arthritis and mortality. *Arthritis Rheum*, 25: 1020-23,1982.
2. ARA committee in rheumatology practice. *Arthritis Rheum*, 20:1278-81, 1977.
3. Pinals RS, Baum J, Bland J, et al: Preliminary criteria for clinical remission in rheumatoid arthritis. *Bull Rheum Dis*, 32:7-10,1982.
4. Fallahi S, Halla JT: *clin Res* 31:650A, 1983.
5. Gray RG, Gottlieb NL: Hand flexor tenosynovitis in rheumatoid arthritis. Prevalence, distribution, and associated rheumatic features. *Arthritis Rheum*, 20:1003-8,1977.
6. Ropes MW, Bennet GA, Cobb S: Revision of diagnostic criteria for rheumatoid arthritis. *Annals Rheum Dis*, 18:49-53,1956.
7. Duthie JJr, Thompson M, Weir MM, Fletcher WB: Medical and social aspects of treatment of rheumatoid arthritis. *Annals Rheum Dis*, 14:133-48,1955.
8. Kellegran JH, Jeffrey MR: The epidemiology of chronic rheumatism. Vol 2, Blackwell, Oxford, 1963.
9. Bordon DA, Stein TL: Extracellular features of rheumatoid arthritis. A systemic analysis of 127 cases. *Am J Med*, 54:455,1973.
10. Anderson SG, Bentzon MW, Houba V, et al: International reference preparation of rheumatoid arthritis serum. *Bull WHO*, 42:311-18,1970.
11. Greenwood BM: Polyarthritis in western Nigeria. I. Rheumatoid arthritis. *Annals Rheum Dis*, 28:488-96,1969.
12. Greenwood BM, Herrick EM, Voller A: Suppression of autoimmune disease in NZB and (NZB x NZW) F1 hybrid mice by infection with malaria. *Nature*, 226:266-67,1970.
13. Thould AK, Simon G: Assessment of radiological changes in the hands and feet in rheumatoid arthritis. Their correlations with prognosis. *Annals Rhum Dis*, 25:220-28,1966.