1

. . . . . .

:

, , .

: 46 ,

14 (mixed group,) ,

32 (positive group,) ,

23 (negative group,) .

Kaye Simplified Scoring Method

, (1), (2),

(3: 1, 2) (4: 3, 4, 5

) 4 , (5)

(6) 6 .

6 ,

, , , C-

. , ,

.

46

(78) 0 .

: 6

, (p value, 0.022). ,

C- (p value, 0.02),

1, 4, 5, 6 1, 2, 3, 5, 6

. 78 0 9

11.5% .

:

, , C- .

Short (1957) (rheumatoid ,

arthritis, RA) 19-96% .

(1). RA ,

,

, , .

(2).

RA

:

62 .   ,

                    (60),   5 mm
                                        (2).
58   (51 ,
              3 ,   2 ,
    1 ,   1)   51
5:46   46   .
                          ,
            14 (mixed group, M)   26-
57 (43)   ,
            32 (positive group, P)   19-
77 (44)   .   1999.10.1.- 1999.12.31.
    RA   23
        (negative group, N)   .
        25 - 67 (51)   .

        M, P, N   40   60
                                    .
P
                        (longitudinal diameter)
        ,   . M

            , P

(fatty hilum)   .
                                          Kaye
        (3)   Simplified Scoring Method
(Table 1),   (1),   (
2),   (1, 2   ;   3),
            (3, 4, 5   ;   4)
            (5)
                                        1   4
    (6)   6   2
                    (Fig. 1).

                            (rheumatoid factor, RF),
            (erythrocyte sedimentation rate, ESR), C-
(C reactive protein, CRP)
        .
    M 14
                        ,   6
                    (Fig. 2).
   P 32   N 23   ,
                                1   6
                    .   , RF,

ESR, CRP   , RF   20 IU/ml, ESR
20 mm/hr, CRP   0.8 ng/dl
        ,   ,
                .
        P   ,   ,   6
            ,   ,
        .

            P   N   46 (78   )
        0   .

M

Table 1. Simplified Scoring Methods*

Grade	Description
0	Normal joint
2	Mild but definite erosion and/or joint space narrowing
3	Moderate erosion and/or joint space narrowing
4	Marked erosion and/or joint space narrowing
	Include bony ankylosis, dislocation, or
	marked subluxation
P	Postoperative joint; use only for articular surgery
X	Cannot evaluate; use only for joints not included on
	the radiograph, or for joints that cannot be scored for
	technical reasons or because of deformity

* proposed by Kaye et al. (3)
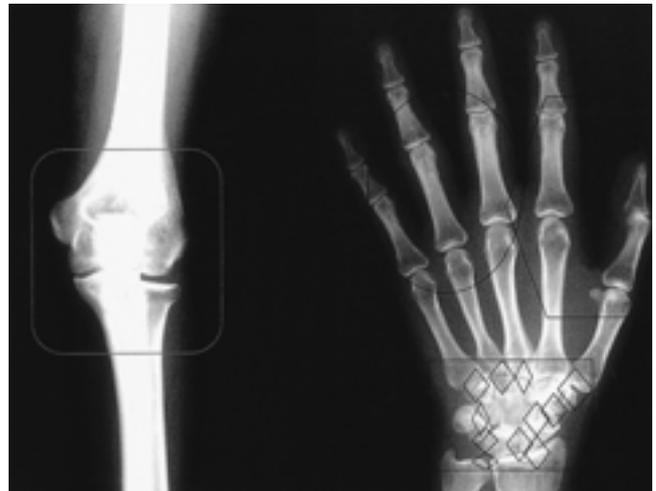
Fig. 1. Example of joint scoring for each compartment of fore-arm.
Joint 1 (□): elbow
Joint 2 (□): wrist composed of multiple carpal joints ( )
Joint 3 (○): 1st and 2nd metacarpophalangeal/proximal inter-
   phalangeal joint
Joint 4 (○): 3rd, 4th, and 5th metacarpophalangeal/proximal
        interphalangeal joint
Joint 5: Sum of all joint scores
Joint 6: Sum of scores of Joint 1 and Joint 4

Wilcoxon signed ranks test   (p value, 0.133).

, P   N   Mann-   P   1- 3 (1.48
Whitney test,   Chi-   ),   0.5- 2.3 cm (1.13 cm),   0.5-
Square test,   Mann- Whitney test   2.3 cm (1.06 cm)   .   1- 5 (
       . P   1.78),   0.5- 2.0 cm (1.29 cm),
        Spearman's correlation   0.5- 2.0 cm (1.20 cm)   .
    .   SPSS 7.5   .   M

                                         ,   6
                                           (p value,
0.022),   5   (marginal
M, P, N   significance)   (Table 2).
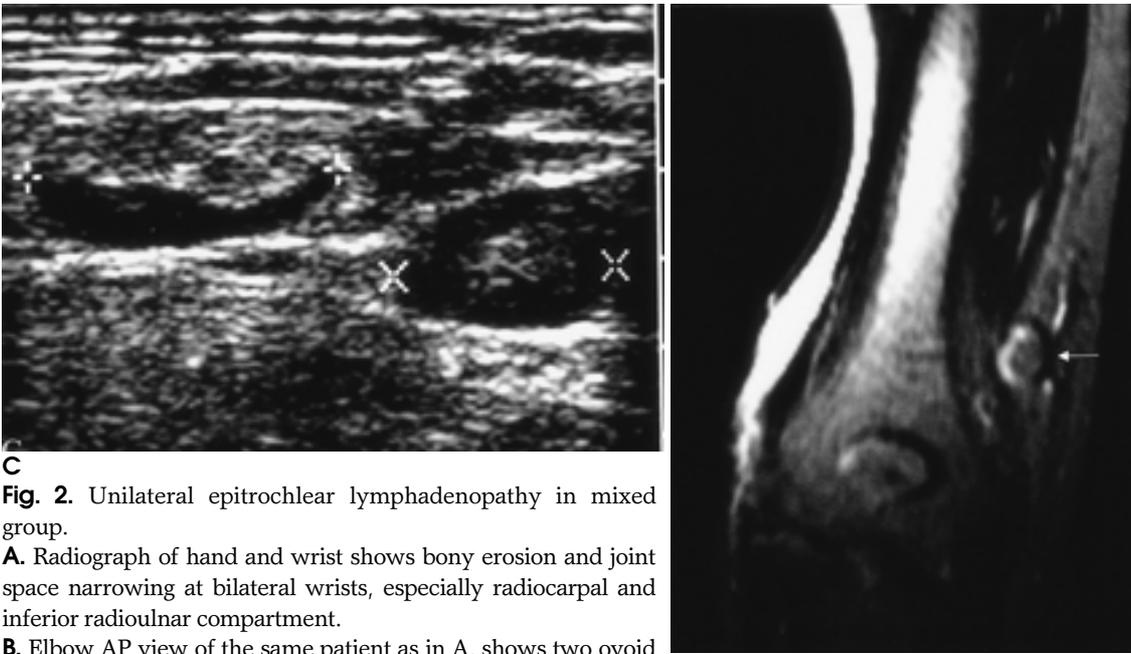
Fig. 2. Unilateral epitrochlear lymphadenopathy in mixed group.
A. Radiograph of hand and wrist shows bony erosion and joint space narrowing at bilateral wrists, especially radiocarpal and inferior radioulnar compartment.
B. Elbow AP view of the same patient as in A, shows two ovoid densities in epitrochlear area only in the right side (arrowheads). Also note mild narrowing of joint space and bony erosion in the right elbow (arrow).
C. The epitrochlear soft tissue densities on radiograph correlated with two superficial lymph nodes with fatty hilum on ultrasonography.
D. T2-weighted coronal MR image shows the lymph node with fatty hilum which is isointense to subcutaneous fat (arrow).

:

P N

3 P ,

1, 4, 5, 6 ,

P ,

4 (Table 3).

N , RF, ESR, CRP

P , CRP

(Table 4).

, ESR CRP (p value, 0.210,

0.098), RF N 23 11 (48%), P 32 24

(76%) ,

(p value, 0.056).

P , , 6

, , 3

, ESR

(p value, 0.013; , 0.48),

. 3

, ,

.

P M RA 46

78 0

9 (11.5%) .

RA

, ,

(4, 5).

(6), Lewin RA

(7), Prior

RA 26

(8).

Table 2. Joint Scores in Mixed Group

Joints	Lymphadenopathy		p value*
	Positive (n = 14)	Negative (n = 14)	
Elbow	1.43 ± 1.60[†]	1.00 ± 1.47	0.288
Wrist	2.00 ± 1.52	2.14 ± 1.51	0.670
1st and 2nd MCP/PIP	3.29 ± 3.38	2.29 ± 3.12	0.205
3rd, 4th, and 5th MCP/PIP	3.07 ± 3.12	2.14 ± 2.45	0.072
Total joints	9.79 ± 7.85	7.57 ± 6.38	0.055
Sum of elbow and ulnar MCP and PIP	4.50 ± 3.90	3.14 ± 2.96	0.022

* p value by Wilcoxon Signed Ranks test
[†] mean ± standard deviation
MCP = metacarpophalangeal joint,
PIP = proximal interphalangeal joint

Table 4. The Difference of Clinical Factors between Positive and Nega-tive Group

Clinical factors	Positive group (n = 32)	Negative group (n = 23)	p value*
Duration (years)	8.36 ± 6.43[†]	9.64 ± 10.42	0.79
Rheumatoid factor (IU/ml)	181.85 ± 159.62	167.40 ± 204.90	0.37
ESR (mm/hr)	45.59 ± 16.93	36.50 ± 17.77	0.08
CRP (ng/dl)	3.09 ± 3.21	1.82 ± 2.49	0.02

* p value by Mann-Whitney test
[†] Mean ± standard deviation
ESR = erythrocyte sedimentation rate, CRP = C-reactive protein

Table 3. The Comparison of Joint Scores between Positive and Negative Group

Joints	Left arm			Right arm		
	Positive group (n = 32)	Negative group (n = 23)	p value*	Positive group (n = 32)	Negative group (n = 23)	p value
Joint 1 (elbow)	1.77 ± 1.67[†]	0.61 ± 1.41	0.008	1.56 ± 1.70	0.65 ± 1.34	0.036
Joint 2 (wrist)	2.81 ± 1.23	1.74 ± 1.81	0.041	2.75 ± 1.32	1.74 ± 1.81	0.055
Joint 3 (radial[‡] MCP/PIP)	2.94 ± 4.30	1.13 ± 2.87	0.034	2.31 ± 4.11	1.95 ± 3.02	0.852
Joint 4 (Ulnar[§] MCP/PIP)	4.56 ± 7.31	1.74 ± 4.52	0.082	4.91 ± 7.38	1.52 ± 4.32	0.013
Joint 5 (total joints)	12.23 ± 13.26	5.22 ± 9.17	0.005	11.53 ± 12.94	6.05 ± 9.01	0.037
Joint 6 (ElU)	6.35 ± 8.47	2.35 ± 5.71	0.005	6.47 ± 8.46	2.17 ± 5.15	0.013

MCP = metacarpophalangeal joint, PIP = proximal interphalangeal joint,
EIU = elbow and ulnar MCP/PIP
* p value by Mann-Whitney test
[†] mean ± standard deviation
[‡] 1st and 2nd fingers
[§] 3rd, 4th, and 5th fingers

. RA
(reactive follicular hyperplasia)

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(9).

3 , 4 , 5
(10),

4 (

5)

(6) 6

. M

6

. P N

6 P

, 5 P . M

P ,

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5)

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RA

. Health

Assessment Questionnaire (HAQ)

(11). (functional

capacity) (disease activity),

, (12),

ESR CRP (13). CRP ESR

(acute phase protein) CRP

(19)

, ESR

(,)

(14). CRP RA

RA

, CRP

CRP

(stabilization) (15).

CRP RA ,

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CRP

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RA

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ESR,

(2).

CRP

, ESR

(; 0.48),

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, N P

, N

P .

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C

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The Clinical Significance of Epitrochlear Lymphadenopathy on Elbow Radiographs in Rheumatoid Arthritis[1]

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Purpose: To evaluate the radiographic findings of epitrochlear lymphadenopathy with regard to the distribution and severity of the disease and clinal parameters in patients with rheumatoid arthritis.

Materials and Methods: Forty six patients with rheumatoid arthritis in whom epitrochlear oval-shaped densities were seen on radiographs were involved in this study. There were 14 cases of unilateral epitrochlear lymphadenopathy in which bilateral arthritic evidence was revealed by radiographs (mixed group), and 32 of bilateral lymphadenopathy in which there was arthritic evidence (positive group). Twenty-three patients in whom lymphadenopathy was not seen on radiographs of the elbow and who were diagnosed as suffering from rheumatoid arthritis functioned as controls (negative group). For scoring the degree of arthritis using the simplified scoring method proposed by Kaye et al., joints were divided into six groups, as follows: Joint 1, elbow; Joint 2, wrist; Joint 3, radial (1st and 2nd) PIP and MCP; Joint 4, ulnar (3rd, 4th, 5th) PIP and MCP; Joint 5, Joints $1+2+3+4$; Joint 6, Joints $1+4$. For each joint, scores were compared with those on the contralateral side in the mixed group. Differences in clinical parameters (disease duration, rheumatoid factor, ESR, and CRP), and scores for each joint in each arm were statistically compared between be positive and negative group. The number, mean diameter, and maximal diameter of epitrochlear lymph nodes were calculated and correlated with clinical parameters and scores for each joint. To evaluate the incidence of epitrochlear lymphadenopathy without radiographic evidence of arthritis in 46 patients (78 arms) with lymphadenopathy, the frequency of cases in which the score for the joint was zero was assessed.

Results: In the mixed group, the mean score for Joint 6 of the arm with epitrochlear lymphadenopathy was significantly higher than that for the contralateral side in the mixed group ($p = 0.022$). Only CRP was significantly higher in the positive group than in the negative ($p = 0.02$). At joints 1, 2, 3, 5 and 6 of the left arm, and at joints 1, 4, 5 and 6 of the right arm, the mean score for each joint was significantly higher in the positive group than in the negative. Among 78 arms in which radiographs revealed epitrochlear lymphadenopathy, the score was zero for all joints in nine cases (11.6%).

Conclusion: In patients with rheumatoid arthritis, evidence of epitrochlear lymphadenopathy, as seen on radiographs of the elbow, appears to be related to the distribution and severity of the disease and to CRP levels.

Index words : Arthritis, rheumatoid
Lymphatic system, diseases

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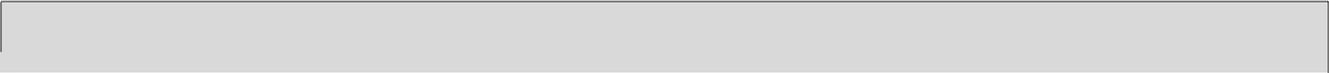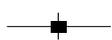
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