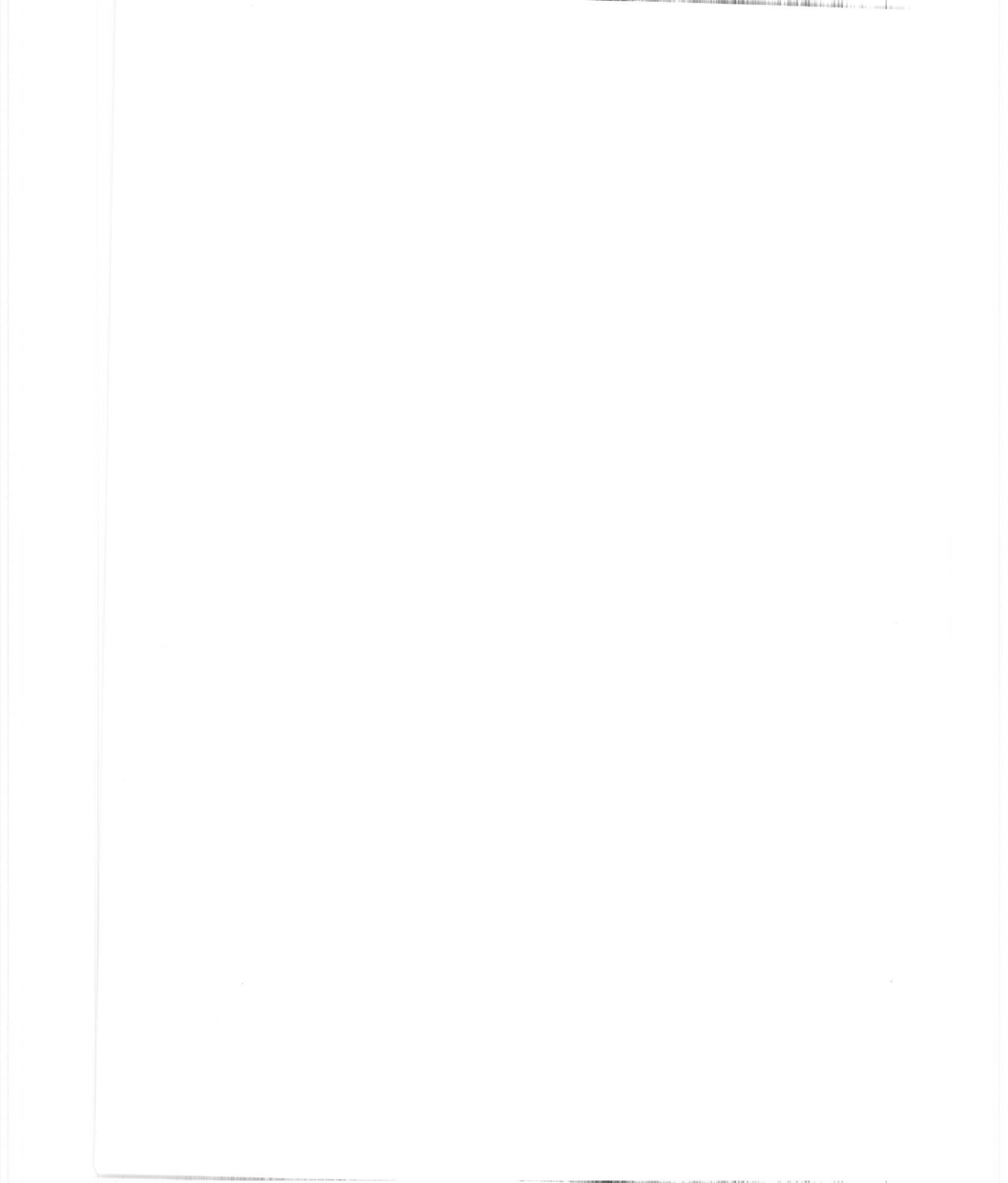


Results



Results

Fifty patients suffering from knee osteoarthritis were included in this study. Their ages ranged between 40-75 years with a mean age of 55.6 ± 9.8 years. They were 34 females (68%) and 16 males (32%) with a female to male ratio of 2.1 : 1.

These patients were classified into two groups:

Group (I): Comprising 33 patients (66%) suffering from knee OA without hand OA. Their ages ranged between 40-70 years (mean 54.2 ± 9.7 years). They were 20 females (60.6%) and 12 males (39.4%) with a female to male ratio of 5:3 (Appendix A).

Group (II): Comprising 17 patients (34%) suffering from knee OA and symptomatic hand OA. Their ages ranged between 40 – 75 years (mean 58.3 ± 9.8 years). They were 14 females (82.4%) and 3 males (17.6%) with a female to male ratio of 4: 1.5, seven patients (41.2%) of this group had clinical and radiological hand OA (Appendix B).

Table (1): Shows comparison between group (I) and group (II) as regards age, disease duration and body mass index (BMI).

No significant difference ($P > 0.05$) was observed between group (I) and group (II) as regard height and sex, (**Figure 1**).

Table (2) Shows radiographic grading of knee OA in-group (I). A significant difference ($P < 0.05$) was observed between both knees, with changes more severe on the right side (**Figure 2**).

Figure (3, 4) : Shows osteoarthritic changes of right knee.

Table (3) Shows clinical findings of right and left hands of patients in group (II).

A significant difference ($P < 0.05$) was observed between both hands with the right hand mostly affected.

Table (4) Shows radiological score of right and left hands of patients in-group (II) (**Figure 5**).

The right knee and right hand were used for comparative studies.

(**Figure 6, 7**) Shows osteoarthritic changes of right hand.

Table (5): Shows comparison between radiological grading of right knee in group (I) and group (II) .

(**Figure 8**): Shows comparison between radiological grading of right knee in group (I) and group (II).

Table (6): Shows clinical scoring of hand osteoarthritis (interphalangeal joint and first carpometacarpal joint) and radiological grading of hand osteoarthritis in-group (II).

A significant positive correlation ($P < 0.05$) was observed between clinical and radiological scores.

Table (7) shows radiological grading of knee OA in-patients with clinical hand OA.

A significant ($P < 0.05$) positive correlation was observed between clinical hand OA and radiological grading of knee OA.

Table (8) Shows correlation between radiological grade of hands OA and radiological knee OA.

A significant ($P < 0.05$) positive correlation with observed between radiological grading of knee and radiological grading of hand OA.

Table (9) Shows correlation of clinical score in hand OA with age, duration of disease and body mass index group (II).

Table (10) Shows correlation of radiological grade in hand OA with age, duration of disease and body mass index group (II).

Table (1): COMPARISON BETWEEN GROUP (I) AND GROUP (II) AS REGARDS AGE, DISEASE DURATION, WEIGHT, HEIGHT AND BODY MASS INDEX.

Variable	Group	Range	Mean \pm SD	P value
Age (years)	Group (I)	40 – 70	54.2 \pm 9.7	< 0.05*
	Group (II)	40 – 75	58.3 \pm 9.8	
Disease duration/years	Group (I)	0.5 – 10	3.6 \pm 1.6	< 0.05*
	Group (II)	0.6 – 5	5.53 \pm 2.76	
Weight (kg)	Group (I)	48-140	84.8 \pm 16.8	< 0.05*
	Group (II)	67-140	95.2 \pm 18.2	
Height (cm)	Group (I)	150-176	164.4 \pm 8.0	> 0.05
	Group (II)	152-183	163.4 \pm 8.2	
Body mass index(kg/m ²)	Group (I)	18.8 – 54.7	31.7 \pm 7.5	< 0.05*
	Group (II)	25.95-54.7	35.8 \pm 7.3	

Kg. = Kilogram

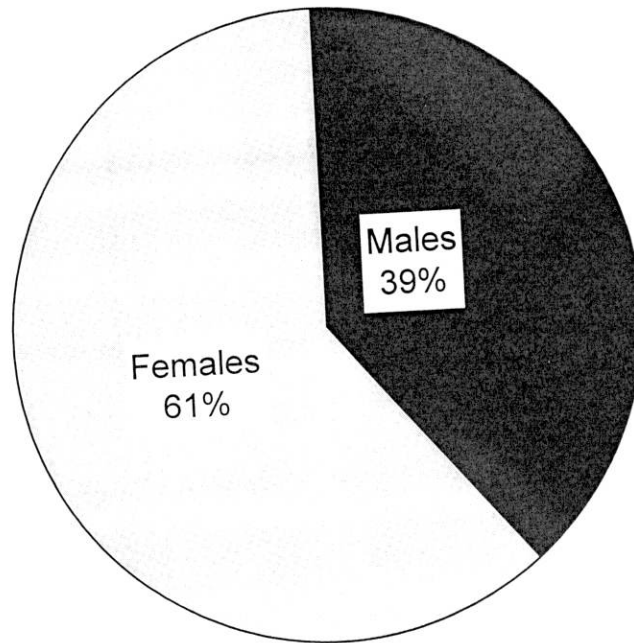
cm. = centimeter

Kg/m² = kilogram/meter square

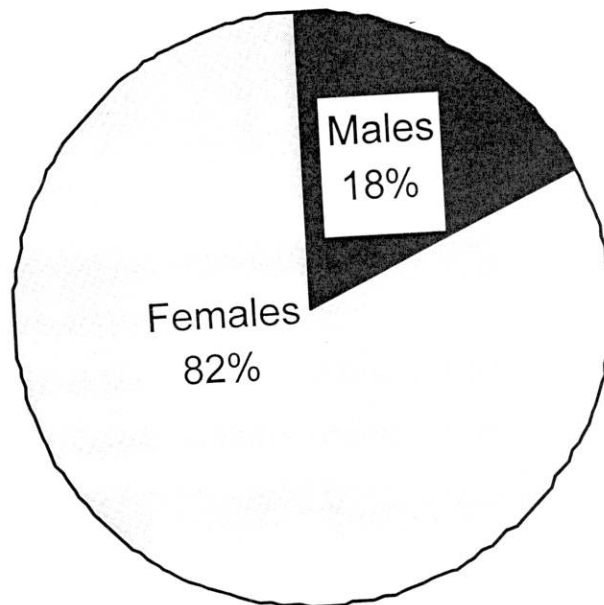
* = Significant difference

Fig.(1): Sex distribution in patients of both groups.

Group (I)



Group (II)

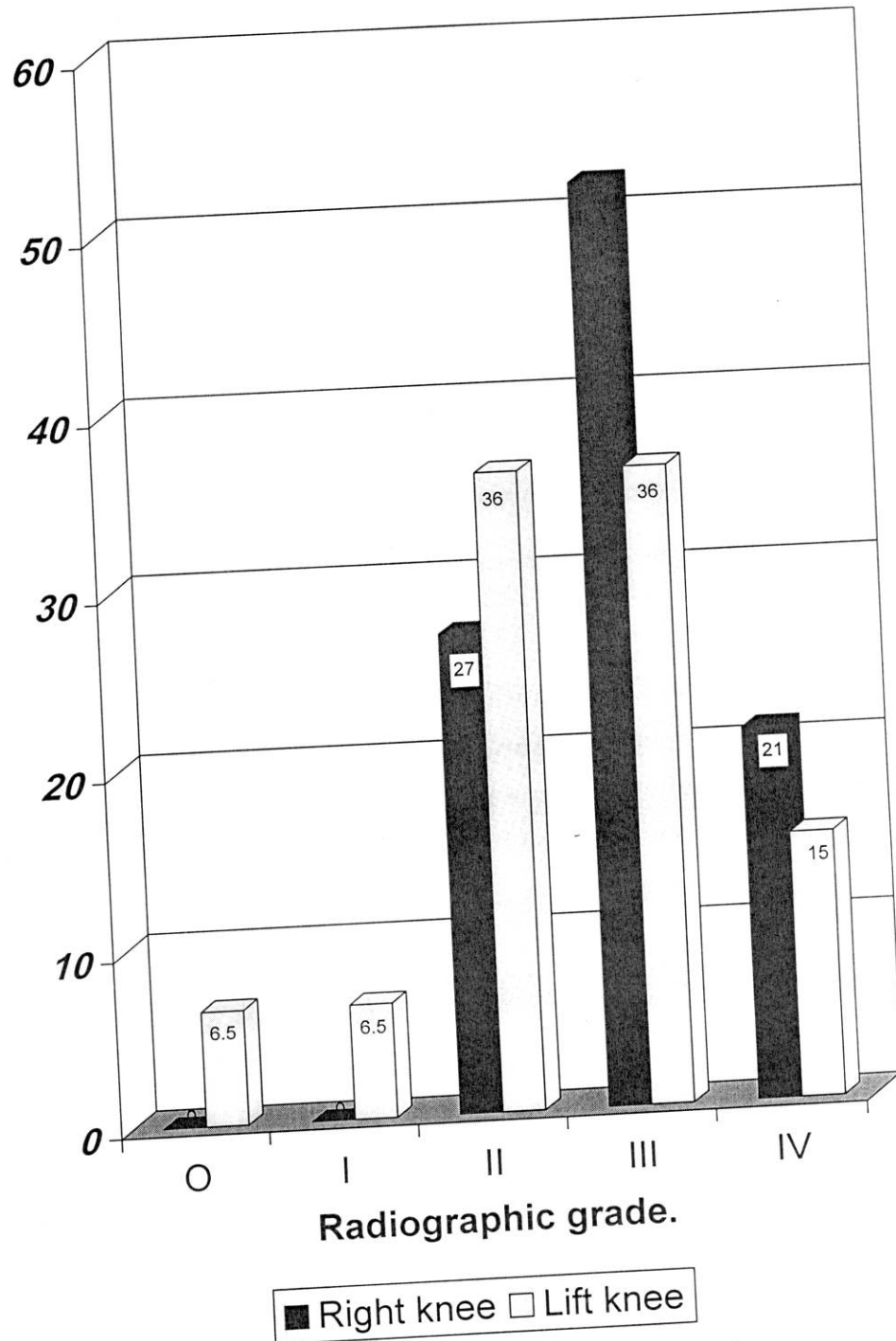


**Table (2): RADIOGRAPHIC GRADING OF KNEE OA
IN PATIENTS OF GROUP (I)**

Grades	Right Knee		Left knee	
	No.	%	No.	%
Grade (0)	-	-	2	6.1%
Grade (I)	-	-	2	6.1%
Grade (II)	9	27.3	12	36.4%
Grade (III)	17	51.5	12	36.4%
Grade (IV)	7	21.2	5	15.2%

P value = <0.05 (Significant)

Fig.(2): Radiological grading of knee O.A. in patients of group I.



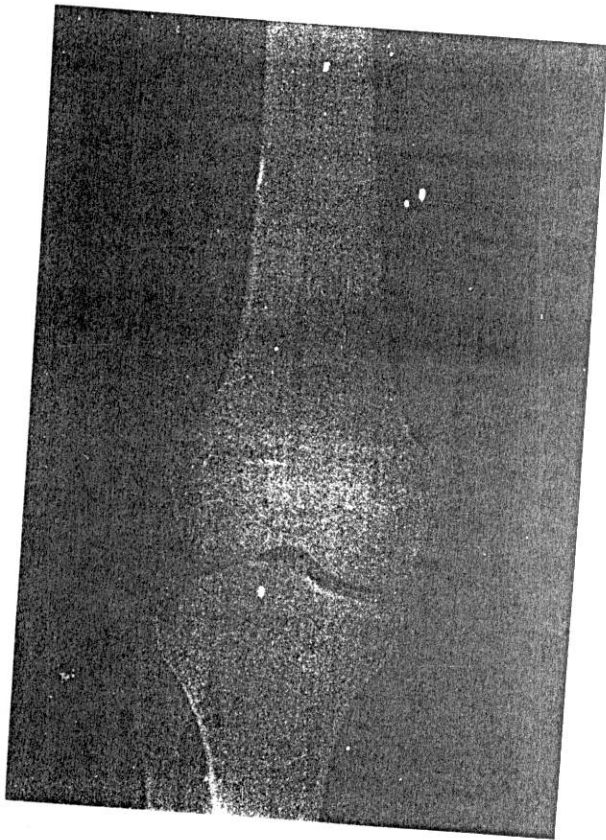


Figure (3): Osteoarthritic changes of right knee (grade III) in a female patient aged 55 years.

Figure (4): Osteoarthritic changes of right knee (grade IV) in a male patient aged 60 years.

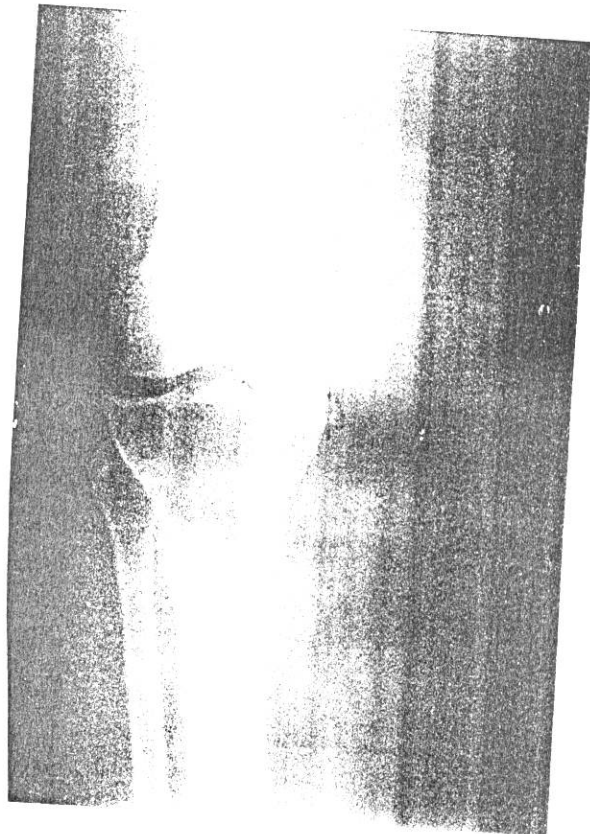


Table (3): CLINICAL FINDINGS OF RIGHT AND LEFT HANDS IN PATIENTS OF GROUP (II)

No. of patient	Clinical score of right hand		Clinical scored of left hand	
	IPJ	1 st CMJ	IPJ	1 st CMJ
1	3	0	2	0
2	3	1	2	1
3	2	0	2	0
4	4	1	4	1
5	4	1	3	1
6	3	1	2	0
7	4	1	3	1

- Ten patients from group (II) had a clinical score of zero.

IPJ = interphalangeal joint.

1st CMJ = first carpometacarpal joint

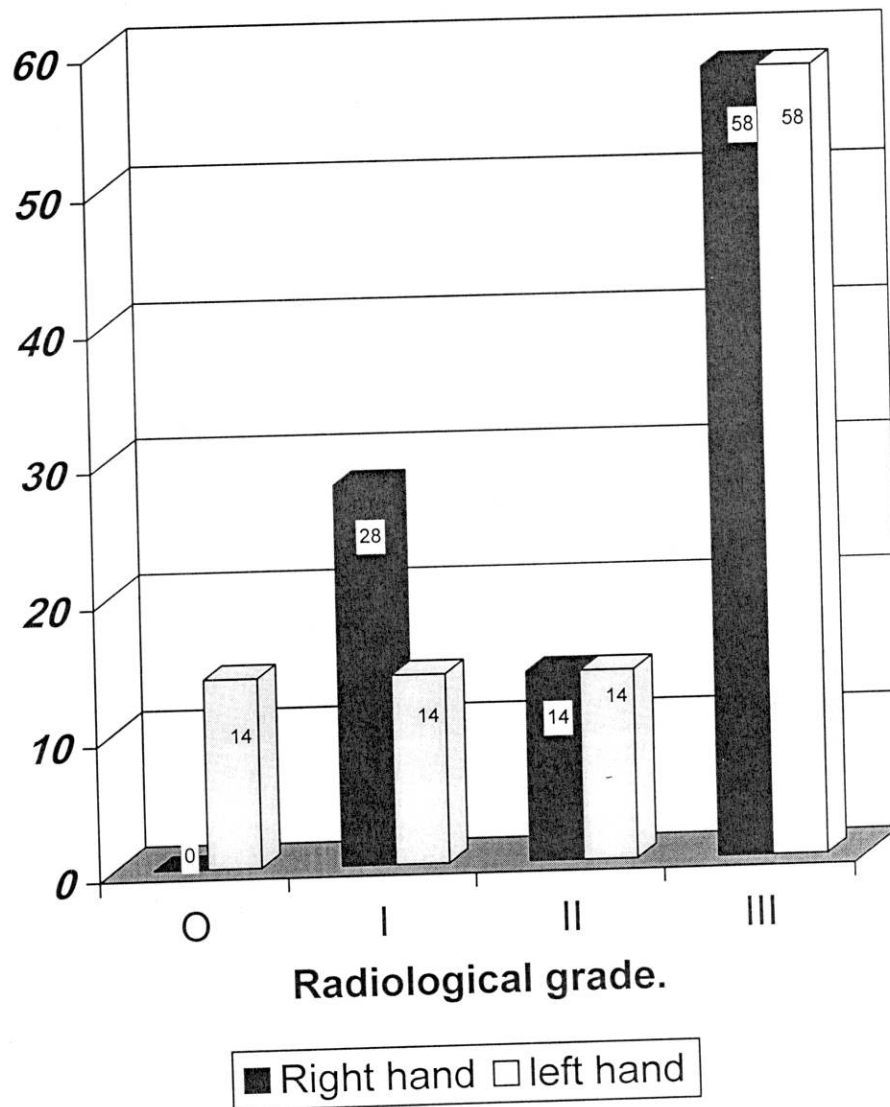
P value = <0.05. (Significant)

Table (4): RADIOLOGICAL SCORE OF RIGHT AND LEFT HANDS OF PATIENTS IN GROUP (II)

No. of patients	Radiological score of right hand	Radiological score of left hand
1	II	II
2	III	III
3	I	0
4	III	III
5	III	III
6	I	I
7	III	III

- Ten patients from group (II) had a radiological score of zero.

Fig.(5): Radiological grading of right & left hands of patients in group II.



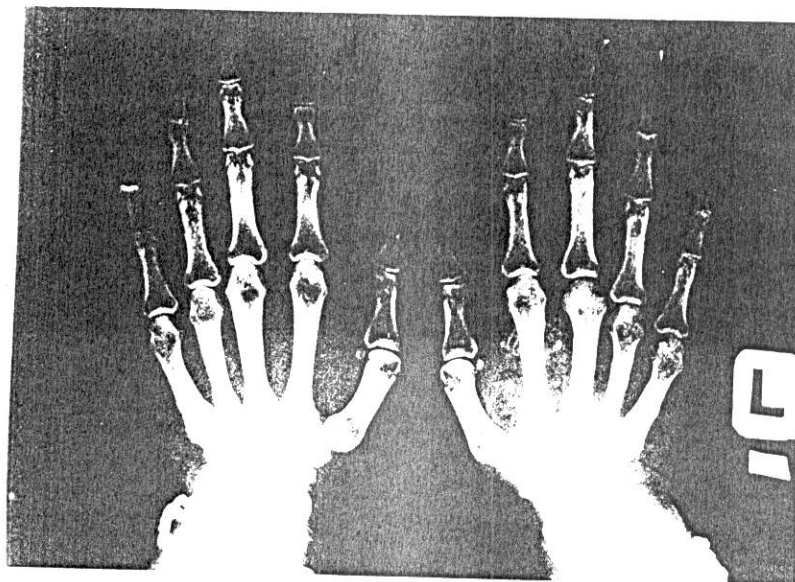


Fig. (6) : Osteoarthritic changes of the right hand (grade II) in a female patient aged 65 years.

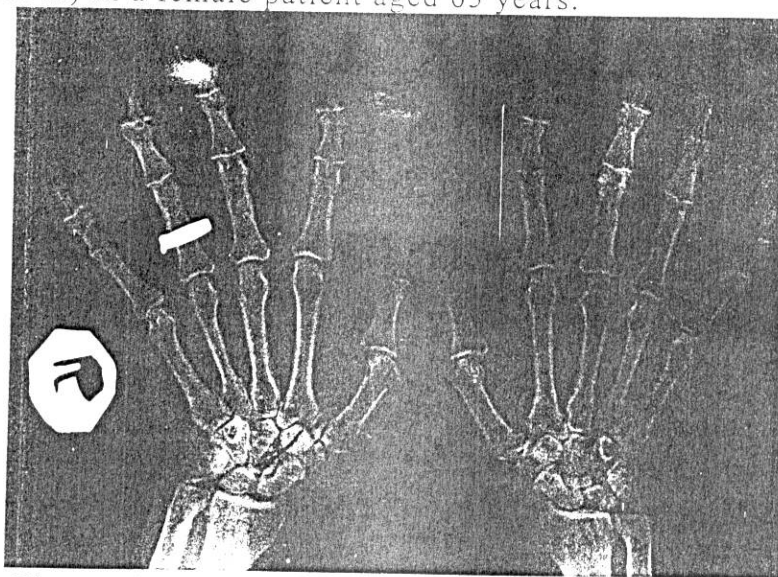


Figure (7): Osteoarthritic changes of the right hand (grade III) in a female patient aged 60 years

Table (5): COMPARISON BETWEEN RADIOLOGICAL GRADES OF RIGHT KNEE IN GROUP (I) AND GROUP (II)

Variable	Group (I)	Group (II)
Number of patients	33	17
Range	2-4	2-4
Mean \pm SD	2.94 \pm 0.7	3.35 \pm 0.61

P value = <0.05 (Significant)

**Fig.(8): Comparison between
radiological grading of right knee in
group I and group II.**

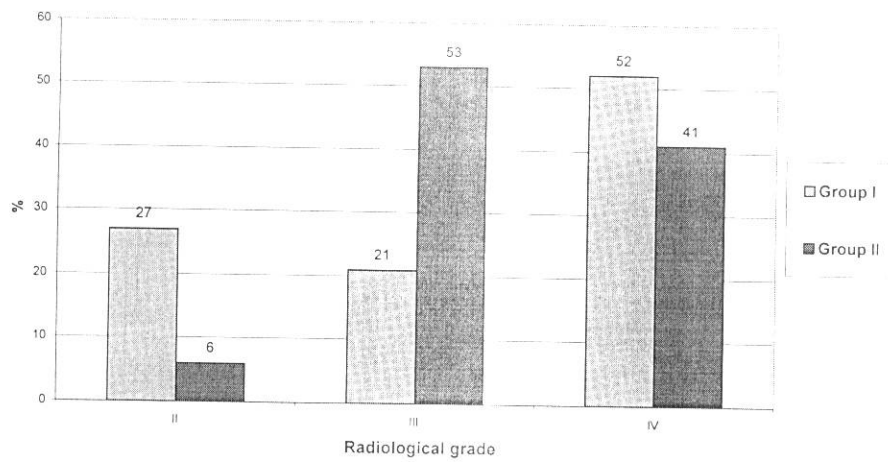


Table (6): CLINICAL SCORE AND RADIOLOGICAL GRADING OF HAND OA

Patients number	Clinical score of hand OA		Radiological grading of hand OA
	IPJ	1 st CMJ	
1	3	0	II
2	3	1	III
3	2	0	I
4	4	1	III
5	4	1	III
6	3	1	I
7	4	1	III

IPJ = interphalangeal joint.

1st CMJ = first carpometacarpal joint

r + 0.79

P < 0.05 (significant)

**Table (7): RADIOLOGICAL GRADING OF KNEE OA
IN PATIENTS WITH CLINICAL HAND OA**

No. of patients	Clinical score hand OA		Radiological grading of knee OA
	IPJ.	1 st CMJ	
1	3	0	IV
2	3	1	IV
3	2	0	III
4	4	1	III
5	4	1	III
6	3	1	IV
7	4	1	IV

IPJ = interphalangeal joint.

1st CMJ = first carpometacarpal joint

$r = 0.06$

$P = <0.05$ (Significant)

Table (8): CORRELATION BETWEEN RADIOLOGICAL GRADING OF HAND OSTEOARTHRITIS AND RADIOLOGICAL GRADING OF KNEE OSTEOARTHRITIS

No. of patients	Radiological grading of hand OA	Radiological grading of knee OA
1	II	IV
2	III	IV
3	I	III
4	III	III
5	III	III
6	I	IV
7	III	IV

$r = +0.05$

$P = <0.05$ (Significant)

**Table (9): CORRELATION COEFFICIENT OF
CLINICAL SCORE IN HAND OA GROUP (II)
WITH AGE, DURATION OF DISEASE AND
BODY MASS INDEX**

Variable	r	P
Age	+ 0.024	< 0.05
Duration of disease	+ 0.52	< 0.05
Body mass index	+ 0.057	< 0.05

r = correlation coefficient

P value = < 0.05 (Significant)

Table (10): CORRELATION COEFFICIENT OF RADIOLOGICAL SEVERITY IN HAND OA GROUP (II) WITH AGE, DURATION OF DISEASE AND BODY MASS INDEX

Variable	r	P
Age	+ 0.04	< 0.05
Duration of disease	+ 0.94	< 0.05
Body mass index	+ 0.41	< 0.05

r = correlation coefficient

P = <0.05 (Significant)

