RESULT

This study included (80) patients of different dermatological diseases (psoriasis, seborrhoeic dermatitis, atopic dermatitis and pityriasis alba) and (20) controls.

I - Psoriatic patients :

20 cases of psoriasis. They are (11) males and (9) females [table I and graph I], their age varied between (5) to (60) years, with mean of (36.25) (table 3). (10) with discoid type, (7) with vulgaris type and (3) with flexural type (table 5).

Table (4) shows the comparison between psoriatic patients and control regarding serum Zn, Cu and (Se) concentration in µg/ml.

1) Zinc in serum of psoriatic patients varied between 0.34 µg/ml and 0.53 µg/ml with a means of 0.428 and

S.D. = 0.7305 (standard diviation).

t = 6.796.

P. Probability = < 0.001. i.e. highly significant.

Statistically significant difference at the level of 0.05% (P < 0.05).

2) Serum (Cu) in psoriatic patients varied between (1.3) µg/ml to (3.01) µg/ml with mean of 1.776 and

S.D. = 0.4992

t = 5.765

p = < 0.001

i.e. Significant.

3) Serum (Se) in psoriatics patients varied between (60) µg/ml to 200 µ g/ml with mean of 114.3 and S.D.

I = 5.015

P. = < 0.001

i.e. = significant

The (5) shows the relation between the clinical type of psoriasis and serum trace elements concentration in psoriatic patients.

In cases of discoid type :

1) the mean concentration ($\bar{X}$) of serum zinc 0.449 and

S.D.= 0.1671

Minimum concentration 0 035.

Maximum concentration = 0.41.

2) Serum Copper ($\bar{X}$) = 1.834 and S.D. = 0.5165

Minimum concentration = 1.5

Maximum concentration = 3.01.

3) Serum selenium ($\bar{X}$) = 119.3 and S.D. = 33.2667.

Minimum concentration = 95

maximum concentration =113

In cases of vulgaris type of psoriasis :

1) The ($\bar{X}$) of serum zinc = 0.3714 and S.D. = 0.0452

Minimum concentration = 0.30.

Maximum concentration = 0.41.

2) $\bar{X}$ of serum copper = 1.755 and S.D. = 0.5922.

Minimum concentration = 1.3.

Maximum concentration = 3.0

3) $\bar{X}$ of serum selenium 101.14 and S.D. = 26. 598.

Minimum concentration = 95

Maximum concentration = 150.

In cases of flexural type of psoriasis.

1) $\bar{X}$ of serum zinc = 0.4733 ± S.D. = 0.055

Minimum concentration = 0.42

Maximum concentration = 0.53.

2) $\bar{X}$ of serum copper = 1.6633 ± S.D. 0.2245.

Minimum concentration = 1.4.

Maximum concentration = 1.85.

(3) $\bar{X}$ of serum selenium = 128.3333 ± S.D. = 45.368.

Minimum concentration = 95

Maximum concentration = 180

* The (t = test) Zinc concentration in clinical types of psoriasis :

1) t between discoid and vulgaris type = 1.397.

i.e. P.= insignificant

2) t between discoid and flexural type = 0.394.

i.e. p. = insignificant.

3) t between vulgaris and flexural type = 2.826.

i.e. p = significant

* The (t) copper concentration in clinical types of psoriasis,

1) t between discoid and vulgaris = 0.282.

i.e. p. = insignificant

2) t between discoid and flexural = 0.804

i.e. p. = insignificant

3) t between vulgaris and flexural = 0.352.

i.e. p. = insignificant.

* The (t) selenium concentration in clinical types of psoriasis.

1) t between discoid and vulgaris = 1.247

i.e. p. = insignificant

2) t between discord and flexural = 0.320.

i.e. p. = significant.

3) t between vulgaris and flexural type = 0.969.

i.e. p. = insignificant.

Table (6) shows the comparison between psoriatic patients (n =5) and controls (n = 5) regarding tissue levels of trace elements (Zn, Cu and Se) in μg/gm of dry weight.

1) Zinc in tissue of psoriatic patients varied between 30 and 60 μg/gm of dry weight with $\bar{X}$ of 43 and S.D. = 12.0415

t. = 2.414

p. < 0.05

i.e. = significant.

2) Copper in tissue of psoriatic patients varied between 15 to 35 μg/gm of dry weight with $\bar{X}$ of 21 and S.D. = 8.2158

t = 0.085

p > 0.05

i.e. insignificant.

3) Selenium in tissue of psoriatic patients varied between 180 to 290μg/gm of dry weight with $\bar{X}$ of 132 and S.D. = 43.2434.

t = 0. 4124.

p > 0.05

i.e. insignificant.

II - Seborrhoeic patients :

20 cases of seborrhoeic dermatitis. They are (5) males and (15) females (table 1), their age varied between (25) to (55) years with mean of (38.5) table. 3. The clinical picture varied from mild form (3), moderate from (7) and sever form (7) table (8).

Table (7) shows the comparison between seborrhoeic patients and controls regarding serum Zn, Cu and Se concentration in μg/ml.

1) Zinc in serum of seborrhoeic patients 0.60 μg/ml with a mean of 0.6005 and S.D. = 0.0 673.

   $t = 1.237$

   $p > 0.05$

   i.e. insignificant decrease.

2) Copper in seborrhoeic patients serum varied between 0.85 to 1.94 μ g/ml with mean of 1.322 and S.D. = 0.2160.

   $t = 4.195$

   $p < 0.001$

   i.e. significant.

3) Selenium in seborrhoeic patients serum varied between 110 to 200 μ g/ml with mean of $\bar{X} = 2.550$ and S.D. = 24.2519

   $t = 2.550$

   $p < 0.05$

   i.e. significant.

Table (8) shows the X and S.D. of serum Zn, Cu and Se levels among seborrhoeic dermatitis with different degree of severity.

In cases of mild form of seborrhoeic dermatitis (n = 6) shows the follows :

1) Serum Zinc $\bar{X}$ = 0.5716 and S.D. - 0.0515

Minimum concentration = 0.36

Maximum concentration = 0.49.

2) Serum copper $\bar{X}$ = 1.20 and S.D. = 0.2193

Minimum concentration = 1.1

Maximum concentration = 1.74.

3) Serum selenium X = 150. 1666 and S.D. = 29.3422.

Minimum concentration = 110.

Maximum concentration = 190.

In moderate form of seborrhoeic dermatitis. (n = 7):

1) $\bar{X}$ of serum zinc = 0.6285 and S.D. = 0.0578.

Minimum concentration = 0.41

Maximum concentration = 0.055.

2) $\bar{X}$ of serum copper = 1.3614 and S.D. = 0.1617.

Minimum concentration = 0.95

Maximum concentration = 1.39.

3) $\bar{X}$ of serum (Se) = 140.8571 and SD. = 26.767.

Minimum concentration = 126.

Maximum concentration = 200

In sever form of seborrhoeic dermatitis (n = 7).

1) $\bar{X}$ of serum Zinc = 0.5971 and S.D. = 0.0840.

Minimum concentration = 0.35

Maximum concentration = 0.60

2) $\bar{X}$ of serum copper = 1.41 and S.D. = 0.2315

Minimum concentration = 0.85

Maximum concentration = 1.39.

3) $\bar{X}$ of serum selenium = 196 and S.D. = 17.1075.
Minimum concentration = 139
Maximum concentration = 180

* The (t) zinc concentration among the clinical degree of seborrhoeic dermatitis.

1) t between mild and moderate form = 1.876.
i.e. (p) = insignificant increase.

2) t between mild and sever form = 0.853.
i.e.(p). insignificant increase.

3) t between moderate and sever form = 0.814.
i.e.(p). = insignificant increase.

* The (t) copper concentration among the clinical degree of seborrhoeic dermatitis.

1) t between mild and moderate form = 2.00
p. significant.

2) t between mild and sever form = 1.485
p. significant.

3) t between moderate and sever form = 0.465.
p. insignificant increase.

* The (t) selenium concentration among the clinical degree of seborrhoeic dermatitis.

1) t between mild and moderate form = 0.593.
p. insignificant decrease.

2) t between mild and sever form = 1.261.
p. insignificant increase.

3) t between moderate and sever form = 0.428
p. insignificant increase.

Table (9) shows the comparison between seborrhoeic patients (n = 5) and controls (n=5) regarding tissue levels of trace elements (Zn,Cu and

(Se) in µg/gm of dry weight.

1) Zinc level in tissue of seborrhoeic patients varied between 25 to 40 µ g/gm of dry weight with $\bar{X}$ of 32 and S.D.= 5.7008.
$t = 0.784$
$p > 0.05$
i.e. = insignificant increase.

2) Copper level in tissue of seborrhoeic patients varied between 15 to 27 µg/gm of dry weight with $\bar{X}$ of 18 ± S.D. = 5.6568
$t = 0.688$
$p. > 0.05$
i.e. = insignificant decrease.

3) Selenium level in tissues of seborrhoeic patients varied between 80 to 250 µg/gm of dry weight with $\bar{X}$ = 150 and S.D. = 62.849.
$t = 0.169.$
$p > 0.05$
i.e. = insignificant increase.

III - Atopic dermatitis patients :

20 cases of atopic dermatitis (AD). They are (12) males and (8) females (table 1) their age varied between (3) to (20) years with mean of (8.65) table (3).

The distribution of atopic patients and controls group according to consanguinity (table 2, figure 2) where shows (8) patient with + ve history of consanguinity between their parents.

(8) patient with mild form of (AD), (7) with moderate form and (5) with sever form (table 11).

Table (10) shows the comparison between atopic patients and controls regarding serum levels of Zn, Cu and Se in μg/ml.

1) Zinc in serum of (AD) patients varied between 0.30 to 0.50 Mg/ml with a mean values of 0.3945 and S.D. = 0.0674.

$t = 13.238$

$p. < 0.001.$

i.e. highly significant.

2) Copper in serum of (AD) patients varied between 1.2 to 1.92 μg/ml with a mean of 1.5165 and S.D. = 0.2463

$t = 5.930$

$p < 0.001$

i.e. p highly significant.

3) Selenium in serum of (AD) patients varied between 75 to 269 µg/ml with a mean of 106.1 and S.D. = 22. 939.

$t = 5.120.$

$p < 0.001$

i.e. highly significant.

Table (11) shows the mean $\bar{X}$ and S.D. of serum trace elements (Zn, Cu and Se) among AD patients with different degree of severity.

In cases of mild form of AD (8) show the following :

1) $\bar{X}$ of serum level of zinc = 0.448 and S.D. = 0.0399.
Minimum concentration = 0.36.
Maximum concentration = 0.50.

2) $\bar{X}$ of serum copper level = 1.3062 and S.D. = 0.0834.
Minimum concentration = 1.2
Maximum concentration = 1.4.

3) $\bar{X}$ of serum level of selenium = 99.142 and S.D. = 13.667.
Minimum concentration = 80
Maximum concentration = 120

In case of moderate form of AD (n = 7) show the following.

1) $\bar{X}$ of serum level of zinc - 0.3928 and S.D. = 0.0558.
Minimum concentration = 0.30.
Maximum concentration = 0.49.

2) $\bar{X}$ of serum level of copper = 1.4625 and S.D. = 0.1562.
Minimum concentration -= 1.28
Maximum concentration = 1.74.

3) $\bar{X}$ of serum level of selenium = 112.25 and S.D. = 32.216.
Minimum concentration = 86
Maximum concentration = 188.

In cases of sever form of AD (n = 5) show the following :

1) $\bar{X}$ of serum level of Zinc = 0.314 and S.D. = 0.026.
Minimum concentration = 0.30
Maximum concentration = 0.31.

2) $\bar{X}$ of serum copper level = 1.876 and S.D. = 0.0502
Minimum concentration = 1.80
Maximum concentration = 1.92.

3) $\bar{X}$ of serum selenium level = 106.0 and S.D. = 15.272.
Minimum concentration = 85
Maximum concentration = 120

* The t zinc concentration in clinical types of AD :

1) t between mild and moderate form = 2.095
P. significant.
2) t between mild and sever form = 7.220.
P. highly significant.
3) t between moderate and sever form = 3.272.
P. significant.

* The t copper concentration in clinical types of AD.

1) t between mild and moderate form = 2.368.
P. significant.
2) t between mild and sever form = 15.375
P. significant.
3) t between moderate and sever form = 6.546.
P. highly significant.

* The t selenium concentration among clinical types of (AD) :

1) t between mild and moderate = 1.0
p. insignificant increase.
2) t between mild and sever = 0.488
p. insignificant increase.
3) t between moderate and sever = 0. 737.
p. insignificant decrease.

Table (12) shows the comparison between AD patients (n = 5) and controls (n = 5) regarding tissue levels of trace elements (Zn, Cu and Se) in µg/gm dry weight.

1) Zinc level in tissue of AD patients varied between 20 to 40 µg/gm of dry weight with $\bar{X}$ of 34 and S.D. = 8.2158.

t = 1.088

p > 0.05 insignificant decrease.

2) Copper level in tissue of AD patients varied between 20 to 40 µg/gm of dry weight with $\bar{X}$ of 33 an S.S. = 8.3666

t = 2.652.

P < 0.05

i.e. significant.

3) Selenium level in tissue of AD patients varied from 80 to 200 µg/gm of dry weight with $\bar{X}$ = 144 and S.D. = 53. 1977

t = 0

p --

IV - Pityriasis alba patients :

20 cases of pityriasis alba. They are (12) males and (8) females (table 14 figure 1), their ages varied between (3) to (15) years with mean of 9.55 (table 3).

(8) with mild form, (8) moderate form and (4) sever form (table 14). Table (13) shows the comparison between pityriasis alba patients and controls regarding serum concentration of Zn, Cu and Se in µg/ml :

1) Zinc in serum of pityriasis alba patients varied between 0.32 to 0.55 μ g/ml with a mean of 0.419 and S.D. = 0.0667.

$t = 4.595$

$p. < 0.001$

i.e. highly significant.

2) Copper in serum of pityriasis alba patients varied between 0.85 to 1.62 with mean of 1.1045 and D.S. = 0.2899.

$t = 3.260$

$p < 0.01$

i.e. significant.

3) Selenium in serum of pityriasis alba patients varied between 80 to 300 μ g/ml with a mean of 124.80 and S.D. = 51. 8891.

$t = 3.470$

$p < 0.01$

i.e. significant.

Table (14) shows $\bar{X}$ and S.D. of trace elements (Zn, Cu and Se) among pityriasis alba patients with different degree of severity.

In Cases of mild form (n = 8) shows the following.

1) $\bar{X}$ of serum zinc in mild form = 0.4037 and S.D. = 0.0578.
Minimum concentration = 0.33
Maximum concentration = 0.50

2) $\bar{X}$ of serum copper in mild from = 1.2612 and S.S. 0.3119
Minimum concentration = 1.10
Maximum concentration = 1.90

3) $\bar{X}$ of serum selenium in mild form =128.875 and S.D. = 58.516.
Minimum concentration = 90
Maximum concentration = 200

In cases of moderate form of pityriasis alba (n = 8) show the following:

1) $\bar{X}$ of serum Zn in moderate form = 0.4525 and S.D. = 0.0664.
Minimum concentration = 0.32
Maximum concentration = 0.55

2) $\bar{X}$ of serum Cu in moderate form = 1.0612 and S.D. = 0.2589
Minimum concentration = 0.85
Maximum concentration = 1.62

3) $\bar{X}$ of serum Zn in moderate form = 124.625 and S.D. = 73.034
Minimum concentration = 100
Maximum concentration = 300

In cases of sever form of pityriasis alba (n = 4) show the following :

1) $\bar{X}$ of serum Zn in sever form = 0.3975 and S.D. = 0.0512
Minimum concentration = 0.32
Maximum concentration = 0.43.

2) $\bar{X}$ of serum Cu in sever form = 0.905 and S.D. = 0.1452
Minimum concentration = 0.75
Maximum concentration = 0.99

3) $\bar{X}$ of serum Se in sever form = 120.75 and S.D. = 25.4738
Minimum concentration = 88
Maximum concentration = 155.

* The (t) zinc concentration in clinical degrees of pityriasis alba.

1) t between mild and moderate form = 1.567

p = insignificant increase.

2) t between mild and sever form = 0.799

p = insignificant decrease.

3) t between moderate and sever form = 2.159

p = significant.

* The (t) copper concentration in clinical degrees of pityriasis alba :

1) t between mild and moderate form = 1.395

p = insignificant increase.

2) t between moderate and sever form = 1.337

p = insignificant decrease.

3) t between mild and sever form = 2.698

p = significant

* The (t) selenium concentration in clinical degrees of pityriasis alba.

1) t between mild and moderate form = 0.145

p = insignificant decrease.

2) t between mild and sever form = 0.435

p = insignificant decrease.

3) t between moderate and sever form = 0.134

p = insignificant decrease.

Table (15) shows the comparison between pityriasis alba patients (n = 5) and controls (n = 5) regarding tissue level of trace elements (Zn, Cu and Se) in µg/gm of dry weight.

1) Zinc in tissue of pityriasis alba patients varied between 25 to 30 µg/gm of dry weight with X of 28 and S.D. = 2.121

t = 2.108

p > 0.05 insignificant decrease.

2) Copper in tissues of pityriasis alba patients varied between 40 to 60 µ g/gm dry weight with X of 49 and S.D. = 7.4161

t = 6.539

p < 0.001

i.e. significant increase.

3) Selenium in tissues of pityriasis alba patients varied between 100 to 200 µg/gm dry weight with X of 142 and S.D. = 42.0713

t = 0.069

p > 0.05

i.e. insignificant decreased

Table (16) shows the correlation coefficient (r) and significant values (p) of serum and tissue (Zn) among the studied groups.

1) In psoriasis (r) = 0.2432 and P > 0.05, i.e. insignificant.

2) In seborrhoeic dermatitis (r) = 0.38673 and p < 0.05

i.e. insignificant

3) In atopic dermatitis (r) = 0.24263 and P > 0.05

i.e. insignificant

4) In pityriasis alba (r) = 0.08350 and P > 0.05

i.e. insignificant.

Table (17) shows (r) and (p) of serum and tissue (Cu) among the studied group.

1) In psoriasis (r) = 0.12025 and P . 0.05

i.e. insignificant

2) In seborrhoeic dermatitis (r) = 0.02734 and P > 0.05

i.e. insignificant

3) In atopic dermatitis (r) = 0.10457 and p > 0.05

i.e. insignificant

4) In pityriasis alba (r) = 0.41039 P > 0.05 i.e. significant

Table (18) shows (r) and (p) of serum and tissues (Se) in studied groups.

1) In psoriasis (r) = 0.36403 and P < 0.05

i.e. insignificant.

2) In seborrhoeic dermatitis (r) = 0.04891 and P . 0.05

i.e. insignificant.

3) In atopic dermatitis (r) = 0.41322 and P < 0.0

i.e. significant

4) In pityriasis alba (r) = 0.26397 and p > 0.05

i.e. significant.

Table (3): Showed mean values $(\bar{X}) \pm$ S.D. of ages among the studied groups compared with controls:

ages / studied group.	$\bar{X} \pm$ SD	Test of significance vessels control	
		t	p
1- Psoriasis	36.25 ± 15.234	0.497	> 0.05
2- Seborrhoeic dermatitis	38.5 ± 9.190	0.809	> 0.05
3- Atopic dermatitis	8.65 ± 5.132	1.038	> 0.05
4- Pityriasis alba	9.55 ± 4.058	1.176	> 0.05
5- Control [I]	39.14 ± 14.872	--	--
6- Control [II]	12.48 ± 7.334	--	--

Table (4) : Comparison between psoriatic patients and control regarding serum zinc (Zn), copper (Cu) and selenium (Se) concentration in µg/ml.

St. group / Trace element	Psoriatic patient (n = 20) $\bar{X} \pm$ S.D.	Control (n = 10) $\bar{X} \pm$ S.D.	t	p
S. Zinc	0.428 ± 0.1245	0.7305 ± 0.1563	6.796 *	< 0.001
S. Cu	1.776 ± 0.4992	0.9281 ± 0.041	5.765*	< 0.001
S.Se	114.3 ± 32.7463	189.49 ± 41.37	5.015*	< 0.001

S. (serum).

Table (7): Comparison between seborrhoeic patients and controls regarding serum (Zn), (Cu) (Se), concentration in μg/ml.

St. group / Trace elements	Seborrhoeic patients (n = 20)	Control (n = 10)	t	p
S. Zn	0.66.5 ± 0.0673	0.730 ± 0.087	1.237	> 0.05
S. Cu	1.322 ± 0.2160	0.9249 ± 0.1935	4.195	< 0.001
S. Se	148.95 ± 24.2519	189.37 ± 45.771	2.550	< 0.05

Table (8) : $\bar{X}$ and S.D. of serum (Zn, Cu, and Se) levels among seborrhoeic dermatitis with different degrees of severity.

trace elements / Seborrhea patients	Zinc $\bar{X}$ ± S.D.	Copper $\bar{X}$ ± S.D.	Selenium $\bar{X}$ ± S.D.
I - Mild (n = 6)	0.5716 ± 0.0515	1.4183 ± 0.2193	150.1666 + 29.3422
II- Moderate (n = 7	0.6285 ± 0.0578	1.2014 ± 0.1617	140.8571 ± 26.767
III - Sever (n = 7)	0.5971 ± 0.0840	1.36 ± 0.2315	156 ± 17.1075
test of significance	+	+	+
I & II	1.876	2.00*	0.593
II & III	0.814	1.485	1.261
I & III	0.853	0.465	0.428

* Significant at the level of 0.05% (P < 0.05).

Table (9): Comparison between sebarrhoeic patients and controls regarding tissue levels of trace elements (Zn, Cu and Se) in μ g/gm of dry weight.

Studied group	Seborrhoeic patients (n = 5)	Controls (n = 5	t	p
	$\bar{X}$ ± S.D.	$\bar{X}$ ± S.D.		
1- Zinc	32 ± 5.7008	30 ± 0.0	0.784	> 0.05
2- Copper	5.5 ± 5.6568	6.1 ±6.2689	0.688	> 0.05
3- Selenium	103 ± 62.849	100 ± 48.27	0.169	> 0.05

Table (10) : Comparison between atopic patients and controls regarding serum Zn, Cu and (Se) concentration in μg/ml.

St group	Atopic patients (n = 20)	Controls (n = 10)	t	p
Serum trace elements.	$\bar{X}$ ± S.D	$\bar{X}$ ± S. D		
S. Zn	0.394 ± 0.0674	0.9432 ± 0.1221	13.238	< 0.001
S. Cu	1.5165 ± 0.2463	0.9964 ± 0.2158	5.930	< 0.001
S. Se	106.1 ± 22.939	186.27± 4 .7744	5.120	< 0.001

Table (11): $\bar{X}$ and S.D. of serum trace elements (Zn, Cu, Se) among atopic patients with different degrees of severity.

Trace element / Atopic patients	Zinc $\bar{X} \pm$ S.D.	Copper $\bar{X} \pm$ S.D.	Selenium $\bar{X} \pm$ S.D.
I Mild (n = 8)	0.448 ± 0.0399	1.3062 ± 0.0834	99.142 ± 13.667
II Moderate (n = 7)	0.3928 ± 0.0558	1.4625 ± 0.1562	112.25 ± 32.216
III Sever (n = 5)	0.314 ± 0.026	1.876 ± 0.0502	106.0 ± 15.575
Test of significance between	*	*	*
I & II	2.095	2.368	1.0
II & III	3.272*	6.546 **	0.737
I & III	7.220 **	15.375 **	0.488

* Statistically significant differences at the level p. of 0.05% ($P < 0.05$)

** Significant of the level of 0.01 % ($P < 0.01$).

Table (12): comparison between atopic patients and controls regarding tissue levels of trace elements (Zn, Cu and Se) in µg/gm dry weight.

Studied group / trace elements	Atopic patients (n = 5)	Controls (n = 5)	t	p
Zinc	34 ± 8.2158	80.0 ± 0.0	1.088	> 0.05
Copper	9 ± 8.3666	6.1 ± 6.2689	2.652	< 0.05
Selenium	100 ± 53.1977	100 ± 48.27	0	--

Table (13): Comparison between pityriasis alba and controls regarding serum concentration of Zn, Cu, Se in μg/ml.

St. group / Serum trace elements	Pityriasis alba patients (n=20) $\bar{X} \pm$ S.D.	Controls (n = 10) $\bar{X} \pm$ S.D.	t	p
S. Zn	0.419 ± 0.0667	0.949 ± 0.3339	4.595	< 0.001
S. Cu	0.4545 ± 0.2899	0.9922 ± 0.2734	3.260	< 0.01
S.Se	124.80 ± 51.8891	186.63 ± 40.3241	3.470	< 0.01

Table (14): $\bar{X}$ and S.D. of trace elements (Zn, Cu, Se) among pityriasis alba with different degree of severity.

Trace element / Pityriasis patient	Zinc $\bar{X} \pm$ S.D.	Copper $\bar{X} \pm$ S.D.	Selenium $\bar{X} \pm$ S.D.
I Mild (n = 8)	0.4037 ± 0.0578	0.5612 ± 0.3119	128.875 ± 38.516
II Moderate (n = 8)	0.4525 ± 0.0664	0.6612 ± 0.2589	124.625 ± 73.034
III Sever (n = 4)	0.3775 ± 0.0512	0.305 ± 0.1452	120.75 ± 25.4738
Test of significance	+	+	+
I & II	1.567	0.395	0.145
II & III	2.159*	1.337	0.134
II & III	0.799	2.698*	0.435

* Statistically significant difference at the level of 0.05% (P < 0.0).

Table (15): Comparison between pityriasis alba patients and controls regarding tissue level of trace elements (Zn, Cu, Se) in µg/gm dry weight.

Studied group / Trace elements	Pityriasis alba patient (n = 5) $\bar{X} \pm$ S.D.	Controls (n = 5) $\bar{X} \pm$ S.D.	t	p
Zinc	28 ± 2.121	30 ± 0.0	2.108	> 0.05
Copper	12 ± 7.9161	6.1 ± 6.2684	6.539	< 0.001
selenium	99 ± 42.0713	100 ± 48.27	0.069	> 0.05

Table (16) : Correlation coefficient (r) and significant values (P) of serum and tissue (Zn) in studied groups.

Tissue zinc / Serum zinc in studied group	r	p
Psoriasis	0.2432	> 0.05
Seborrhoeic dermatitis	0.38673	< 0.05
Atopic dermatitis	0.24263	> 0.05
Pityriasis alba	0.08350	> 0.05

Table (17): Correlation coefficient (r) and probability values (p) between serum and tissue (Cu) among the studied group.

Tissue Cu / Serum Cu in studied group	r	p
Psoriasis	0.12025	> 0.05
Seborrhoeic dermatitis	0.02734	> 0.05
Atopic dermatitis	0.10457	> 0.05
Pityriasis alba	0.41039	< 0.05

Table (18): Correlation coefficient (r) and probability values (P) of serum and tissues (Se) in studied groups.

Tissue Se / Serum Se in studied group	r	P
Psoriasis	0.36403	< 0.05
Seborrhoeic dermatitis	0.04891	> 0.05
Atopic dermatitis	0.41322	< 0.05
Pityriasis alba	0.26397	> 0.05

Fig.(1): Sex distribution among the studied groups .

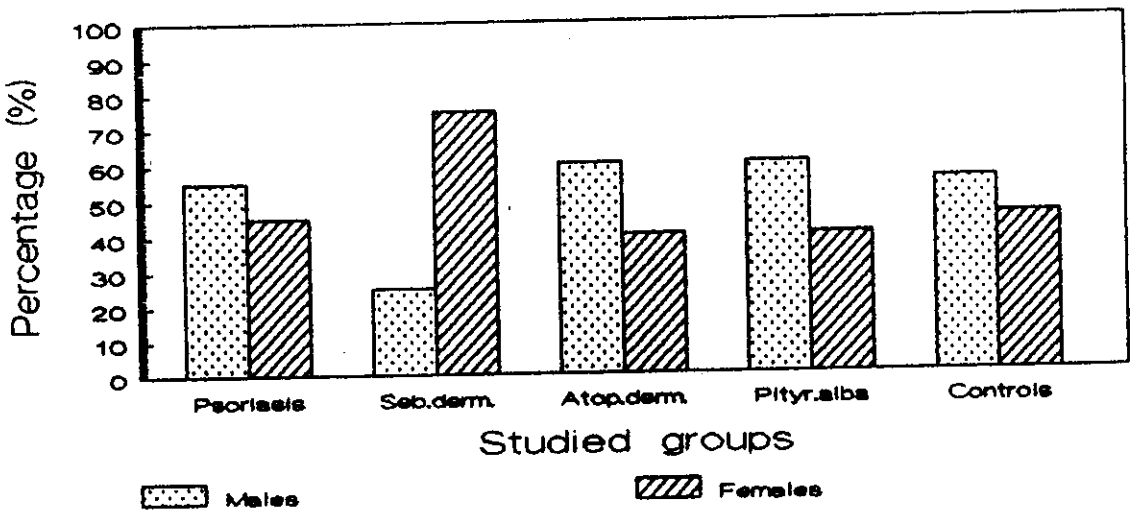

Fig.(2): Consanguinity among cases of atopic dermatitis and controls .

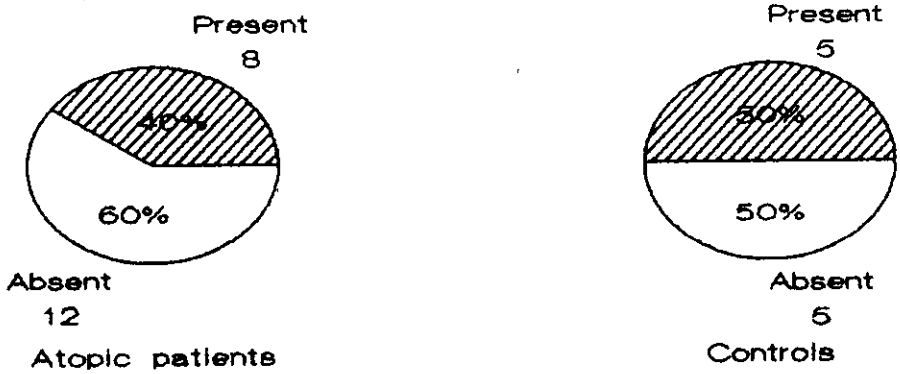

Fig.(1): Serum selenium (µg/ml) among psoriatic patients and their controls.