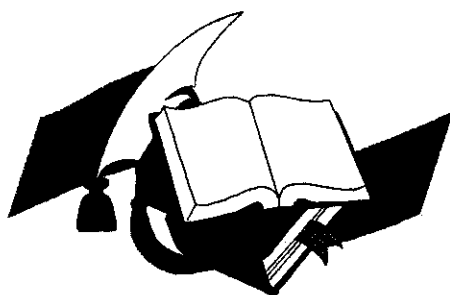


# RESULTS



## RESULTS

**Table (4): Beta-Endorphin concentration in patients with psoriasis, and patients with atopic dermatitis versus control.**

Group	B-END (pg/ml) (mean $\pm$ SD)
Psoriasis (N = 20)	14.2 $\pm$ 5.9a
Atopic dermatitis (N = 20)	9.3 $\pm$ 2.2b,c
Control (N = 10)	6.9 $\pm$ 2.3

P < 0.05    a) control versus psoriasis.  
                  b) control versus atopic dermatitis.  
                  c) Psoriasis versus atopic dermatitis.

Table (4) shows a significant increase in serum B-END concentration in patients with psoriasis and atopic dermatitis versus control group. There is also a significant increase in B-END concentration in psoriasis group versus atopic dermatitis group.

**Table (5): Relation between beta-endorphin concentration and severity, percentage of skin affection, pruritus, asthma and family history of atopy in atopic dermatitis patients.**

Lesion	B-END (Pg/ml) (mean $\pm$ SD)
1- Severity	
Mild (N = 10)	8.1 $\pm$ 2.1
Severe (N = 10)	10.5 $\pm$ 1.5a
2- Percentage of skin affection	
↓ 9% of body surface area (N =10)	8.1 $\pm$ 2.1
↑ 36% of body surface area (N =10)	10.5 $\pm$ 1.5b
3- Pruritus	
Mild (N= 10)	8.1 $\pm$ 2.1
Severe (N = 10)	10.5 $\pm$ 1.5c
4- Asthma	
No (N = 13)	9.2 $\pm$ 2.3
Yes (N = 7)	9.4 $\pm$ 2.2
5- Family history of atopy	
No (N = 3)	10.2 $\pm$ 2.3
Yes (N = 17)	9.1 $\pm$ 2.2

a,b,c,  $P < 0.05$

mild versus severe

Table (5) shows that severity of atopic dermatitis, percentage of skin affection as well as severity of pruritus have a significant increase of B-END concentration when compared to mild cases.

**Table (6): Relation between beta-endorphin concentration and severity, percentage of skin affection and pruritus in psoriatic patients.**

Lesion	B-END (Pg/ml) (mean $\pm$ SD)
<b>1- Severity (PASI Score)</b>	
Mild (10) (N = 10)	11.5 $\pm$ 4.1
Severe (10) (N=10)	16.8 $\pm$ 6.3a
<b>2- Percentage of skin affection</b>	
$\leq 10\%$ of body surface area: (N=3)	11.3 $\pm$ 4.4
$> 10\%$ of body surface area (N=17)	14.7 $\pm$ 3.3b
<b>3- Pruritus</b>	
No (N = 16)	14.1 $\pm$ 6.3
Yes (N = 4)	14.6 $\pm$ 4.5

a,b P < 0.05      mild versus severe psoriasis

Table (6) shows the effect of severity and percentage of skin affection as well as pruritus on B-END concentration.

There is a significant increase in B-END in severe cases when compared to mild cases of psoriasis and in cases with skin affection more than 10% of body surface area when compared with cases with skin affection less than and/or equal to 10% of body surface area.

**Table (7): Serum cortisol, thyroxin, thyroid stimulating hormones in patients with psoriasis, atopic dermatitis versus control.**

Group	Cortisol ( $\mu\text{g/dl}$ )	T4 ( $\mu\text{g/dl}$ )	TSH ( $\mu\text{ IU/ml}$ )
Control (N = 10)	$14.1 \pm 3.3$	$11.8 \pm 2.9$	$0.8 \pm 0.1$
Psoriasis (N = 20)	$21.1 \pm 7.2$	$11.6 \pm 1.9$	$0.8 \pm 0.1$
Atopic dermatitis (N=20)	$13.6 \pm 2.4_{a,b}$	$8.7 \pm 2.1_{a,b}$	$0.97 \pm 0.2$

$P < 0.05$

a) control versus atopic dermatitis

b) psoriasis versus atopic dermatitis.

Table (7) shows a significant increase in serum cortisol concentration in patients with psoriasis versus atopic dermatitis and control groups. Also it shows a significant increase in serum T4 concentration in patients with psoriasis versus atopic dermatitis group.

**Table (8): Comparison between beta-endorphin concentration in mild atopic dermatitis, mild psoriasis and control cases.**

Group	B-END (pg/ml)
Control (N = 10)	6.9 ± 2.3
Mild atopic dermatitis (N = 10)	8.1 ± 2.1 <sup>a</sup>
Mild psoriasis (N = 10)	11.5 ± 4.1 <sup>b,c</sup>

P < 0.05.

a) control versus mild AD

b) control versus mild psoriasis

c) mild atopic dermatitis versus mild psoriasis

Table (8) shows a significant increase in concentration of **B-END** in mild psoriatic patients and mild atopic dermatitis patients versus control and also there is a significant increase in **B-END** concentration in mild psoriasis patients versus mild atopic dermatitis patients.

**Table (9): Comparison between beta-endorphin concentration in severe atopic dermatitis, severe psoriasis and control.**

Group	B-END (pg/ml)
Control (10)	$6.9 \pm 2.3$
Severe atopic dermatitis (10)	$10.5 \pm 1.5a$
Severe psoriasis (10)	$16.8 \pm 6.3 b,c$

$P < 0.05$

- a) control versus severe AD.
- b) control versus severe psoriasis
- c) severe AD versus severe psoriasis.

Table (9) shows a significant increase in concentration of **B-END** in severe psoriatic patients and severe atopic dermatitis patients versus control and also there a significant increase in **B-END** concentration in severe psoriasis patients versus severe atopic dermatitis patients.

**Table (10): Comparison between mild, severe psoriasis mild, severe atopic dermatitis in beta-endorphin, cortisol, thyroxine, thyroid stimulating hormones concentration.**

Group	B-END pg/ml	Cortisol ug/dl	Thyroxin ug/dl	T.S.H. uIU/ml
Mild psoriasis (10)	11.5 ± 4.1	12.5 ± 4.5	10 ± 1.3	0.5 ± 0.1
Severe psoriasis (10)	16.8 ± 6.3	2.5 ± 1.4a	13 ± 0.8a	0.5 ± 0.1
Mild atopic derm. (10)	8.1 ± 2.1	8.7 ± 1.4	8.7 ± 2.3	0.9 ± 0.1
Severe atopic derm. (10)	10.5 ± 1.5	10.8 ± 2.9	8.7 ± 2	1.1 ± 0.3

a P< 0.05                      mild versus severe

Table (10) show a significant increase in **B-END** concentration in severe psoriasis versus mild psoriasis and in severe atopic dermatitis versus mild atopic dermatitis.

There also a significant increase in cortisol and thyroxin concentration in severe psoriasis versus mild psoriasis.



**Table (11): The relation between stress and the concentration of beta-endorphin, cortisol, T4, TSH in patients with psoriasis and atopic dermatitis.**

Group	B-END (pg/ml)	Cortisol ug/dl	T4 ug/dl	TSH uIU/ml
<b>1- Psoriasis</b>				
Non stress (N=6)	12.2 ± 7.3	12.2 ± 5.3	17.3 ± 8.2	0.2 ± 1.9
Stress (1N= 4)	15 ± 9.8	25.0 ± 6a	19.4 ± 7	0.8± 1.9
<b>2- Atopic dermatitis</b>				
Non stress (N=12)	9.9 ± 2	10.2 ± 2.9	9 ± 2.7	0.9 ± 0.2
Stress (N = 8)	8.3 ± 2.2	18.9 ± 1.4a	8.2 ± 0.8	0.9 ± 0.3

aP < 0.05 stress versus no stress

Table (11) shows that stress has a non significant effect on B-END concentration as well as T4, TSH concentration in psoriasis and atopic dermatitis group of patients.

While stress show a significant effect on cortisol concentration when compared to cases with no stress in psoriasis and atopic dermatitis patients.

# MASTER SHEET OF ATOPIC DERMATITIS CASES (1-20)

Cases No.	Age (yrs)	Sex	Age of onset (yrs)	Duration (months)	Relation to stress	Percentage of skin affection	Co-existence of asthma	Family atopy	Pruritus	Severity	Score summation	B-END (pg/ml)	Cortisol µg/dl	T4 µg/dl	TSH µIU/ml
1	28	F	24	24	-ve	6%	-ve	+ve	Mild	Mild	3	9.9	8.6	15.1	0.9
2	20	M	17	36	+ve	6%	-ve	+ve	Mild	Mild	3	10.5	17.1	7.5	1.0
3	28	F	25	36	+ve	3%	-ve	+ve	Mild	Mild	3	7.5	19.3	8.3	0.8
4	14	M	3	123	-ve	6%	+ve	+ve	Mild	Mild	4	8.7	5.6	8.4	0.8
5	46	F	36	120	+ve	6%	-ve	+ve	Mild	Mild	3	4.7	20.9	7.9	0.9
6	28	M	8	480	-ve	6%	+ve	+ve	Mild	Mild	4	5.7	8.7	8.2	0.8
7	50	M	45	60	+ve	6%	-ve	+ve	Mild	Mild	3	6.7	19.5	7.2	0.7
8	30	F	20	120	+ve	6%	-ve	+ve	Mild	Mild	4	8.7	18.8	8.7	1.0
9	30	M	20	120	+ve	6%	-ve	+ve	Mild	Mild	3	6.9	20.0	7.7	0.9
10	2	F	1/2	18	-ve	6%	-ve	+ve	Mild	Mild	4	11.2	9.3	7.9	0.9
11	10	F	1	120	-ve	39%	-ve	+ve	Severe	Severe	8	11.2	8.3	5.9	0.8
12	58	M	25	336	+ve	39%	+ve	-ve	Severe	Severe	9	10.7	16.6	8.7	1.6
13	3	F	1	24	-ve	50%	+ve	-ve	Severe	Severe	9	9.7	12.8	8.5	0.8
14	4	M	1	36	-ve	60%	-ve	+ve	Severe	Severe	8	11.5	16.5	13.0	0.9
15	10	M	3	84	-ve	48%	-ve	+ve	Severe	Severe	9	8.7	8.2	6.1	1.2
16	12	M	1	132	-ve	54%	+ve	+ve	Severe	Severe	8	7.9	10.5	7.5	1.3
17	26	M	20	72	+ve	72%	+ve	-ve	Severe	Severe	9	10.3	19.5	9.5	0.8
18	3	F	1	24	-ve	60%	-ve	+ve	Severe	Severe	8	12.5	8.7	8.4	0.9
19	2	M	1/2	18	-ve	72%	-ve	+ve	Severe	Severe	8	9.7	12.7	9.5	1.3
20	5	F	1	48	-ve	72%	+ve	+ve	Severe	Severe	9	12.5	11.9	10.0	1.1

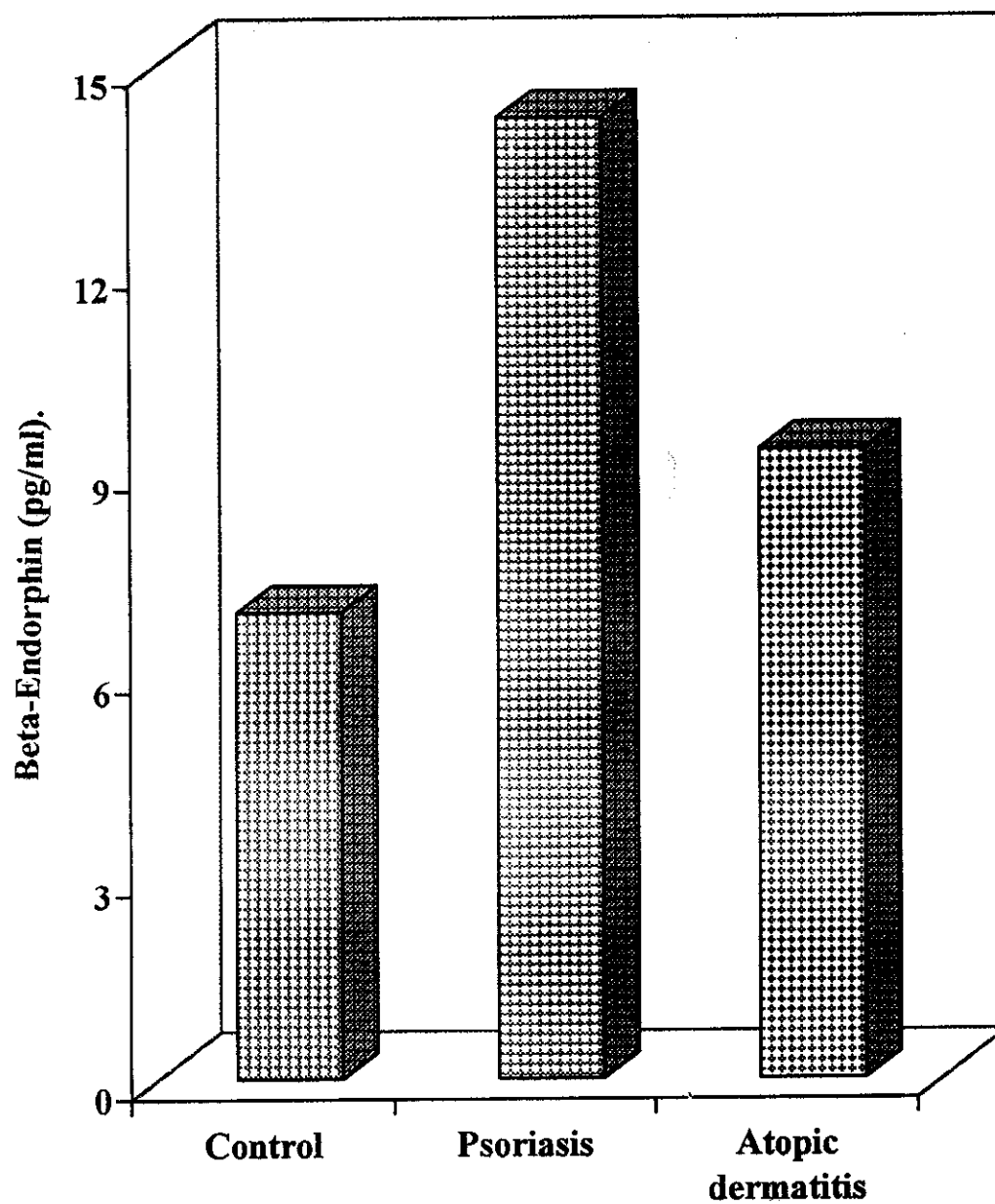
# MASTER SHEET OF PSORIASIS CASES (1-20)

Case No.	Age (yrs)	Sex	Age of onset	Duration (months)	Relation to stress	Nail involvement	Arthritis	Pruritus	Percentage skin affection	PASI score	Duration of recent relapse (months)	Severity	B-ENDOR (pg/ml)	Cortisol µg/dl	T4 µg/dl	TSH µIU/ml
1	25	M	24	12	+ve	-ve	-ve	+ve	20%	3	3	Mild	20	21.5	11	0.8
2	18	M	16	24	+ve	-ve	-ve	+ve	20%	3	1	Mild	10.2	29.9	11.4	0.5
3	10	F	7	36	-ve	-ve	-ve	+ve	10%	2.1	2	Mild	11.5	8.8	8.2	0.5
4	25	M	15	120	+ve	-ve	-ve	+ve	30%	7.2	1	Mild	16.5	8.4	7.7	0.3
5	46	F	42	48	+ve	-ve	-ve	-ve	30%	3.2	2	Mild	8.8	27.8	9.4	0.4
6	14	F	14	1	-ve	+ve	-ve	-ve	10%	4.8	1	Mild	8.9	13.9	11	0.5
7	30	M	28	26	-ve	+ve	+ve	-ve	30%	5.4	2	Mild	7.5	10.5	10.3	0.4
8	50	M	30	240	+ve	-ve	-ve	-ve	30%	9.6	3	Mild	10.5	23.6	10.5	0.4
9	37	M	27	120	-ve	-ve	-ve	-ve	10%	2.8	2	Mild	13.5	25.5	11.2	0.5
10	56	M	26	360	+ve	-ve	-ve	-ve	30%	4.9	1	Mild	7.3	22.7	9.9	0.6
11	37	M	32	60	+ve	-ve	+ve	-ve	50%	30.8	4	Severe	25	25.5	14	0.3
12	50	M	48	24	-ve	-ve	-ve	-ve	70%	38.7	5	Severe	22	14.7	13.5	0.5
13	25	F	10	180	+ve	-ve	-ve	-ve	90%	35.1	3	Severe	10.9	23.9	14.5	0.4
14	30	F	28	24	+ve	-ve	-ve	-ve	80%	50.6	6	Severe	15	25.5	12.5	0.6
15	55	M	55	1	+ve	-ve	-ve	-ve	90%	55.0	4	Severe	27	22.9	12.2	0.6
16	38	F	35	36	+ve	+ve	+ve	-ve	70%	43.0	3	Severe	10	25.1	12.7	0.5
17	20	F	15	60	+ve	-ve	-ve	-ve	70%	32.0	5	Severe	15	23.7	11.9	0.4
18	45	M	40	60	+ve	-ve	+ve	-ve	80%	49.0	7	Severe	20	28	13.7	0.3
19	18	F	17	12	+ve	+ve	-ve	-ve	90%	34.0	3	Severe	14	25	13.1	0.6
20	13	F	13	1	-ve	-ve	-ve	-ve	70%	38.7	5	Severe	9.5	16.9	12.9	0.5

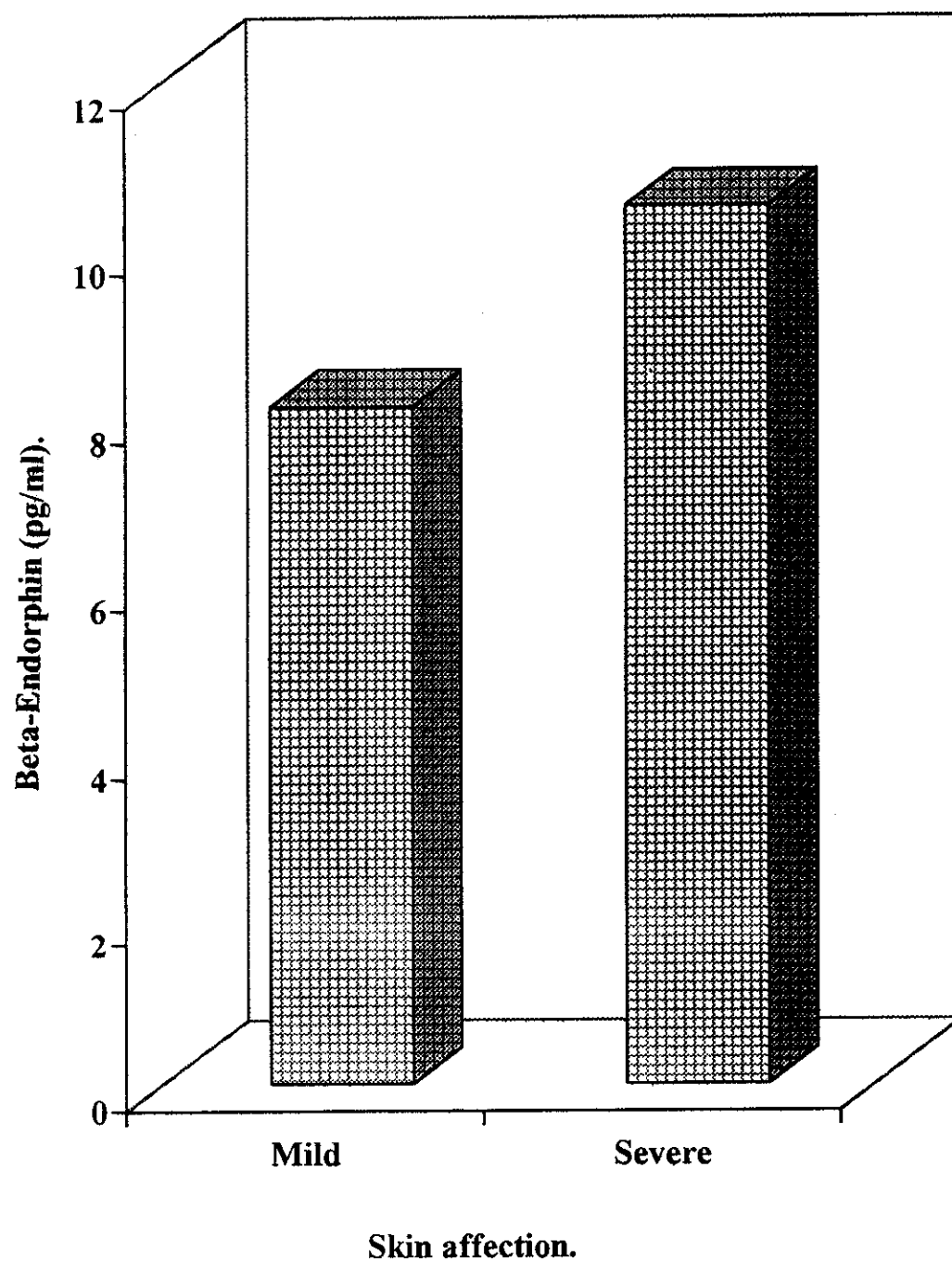
**MASTER SHEET OF CONTROL CASES**

Case no.	Age (yrs)	Sex	B-END pg/ml	Cortisol ug/dl	T4 ug/dl	TSH uIU/ml
1	23	M	6.2	6	5.6	0.6
2	16	M	5.5	18.9	10	0.6
3	35	M	5	16.0	17.1	0.7
4	45	M	4	15	13.3	0.8
5	45	M	10.5	14.1	11.2	0.7
6	21	F	9.5	13.9	12.2	0.9
7	28	F	8.7	15	13	0.7
8	5	F	5.7	16.2	12.7	0.6
9	18	F	4.9	12.9	11.9	0.6
10	50	F	9.1	13.1	10.9	0.8

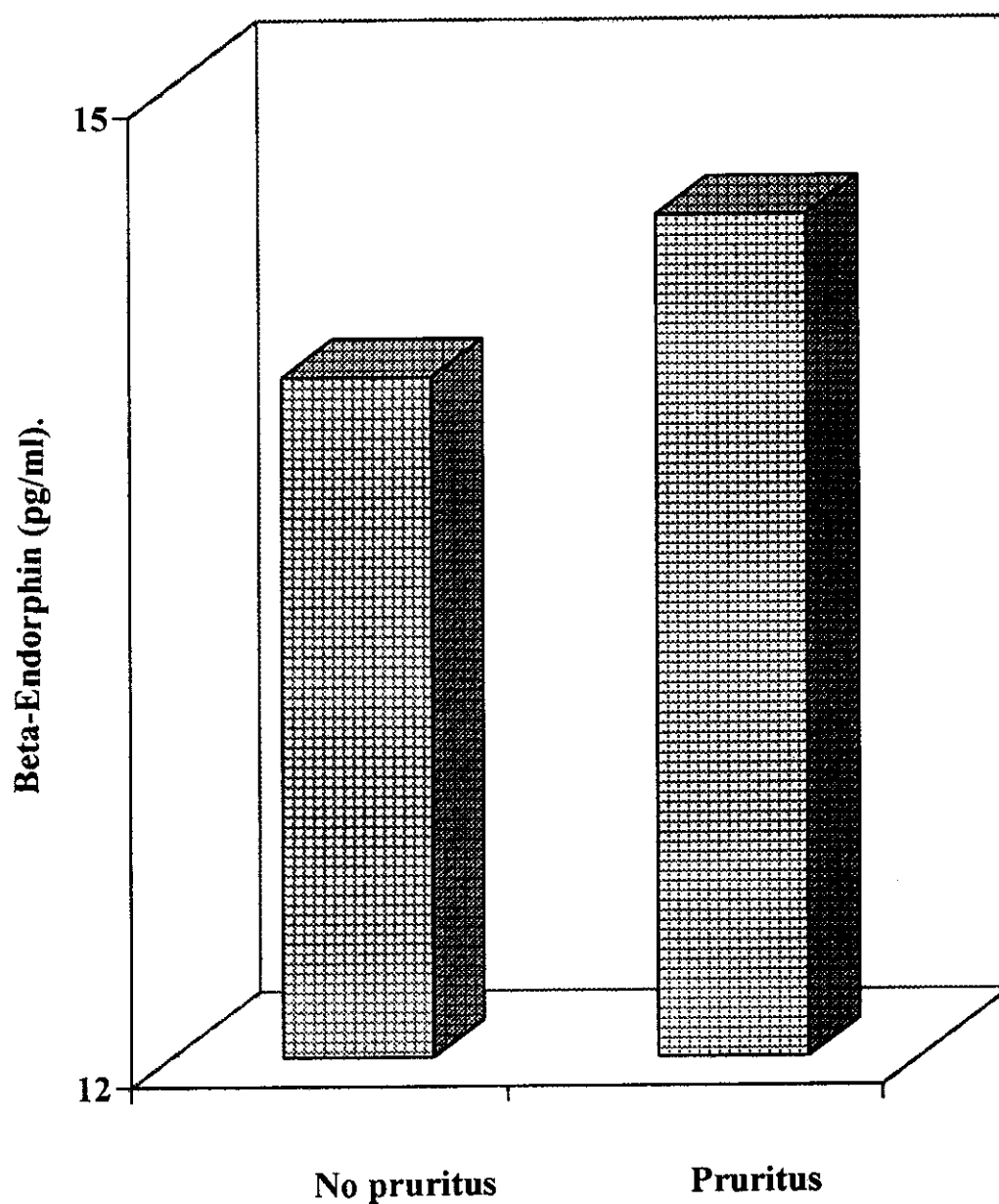
**Figure (1): Beta-endorphin concentration in patients with psoriasis and patients with atopic dermatitis versus control.**



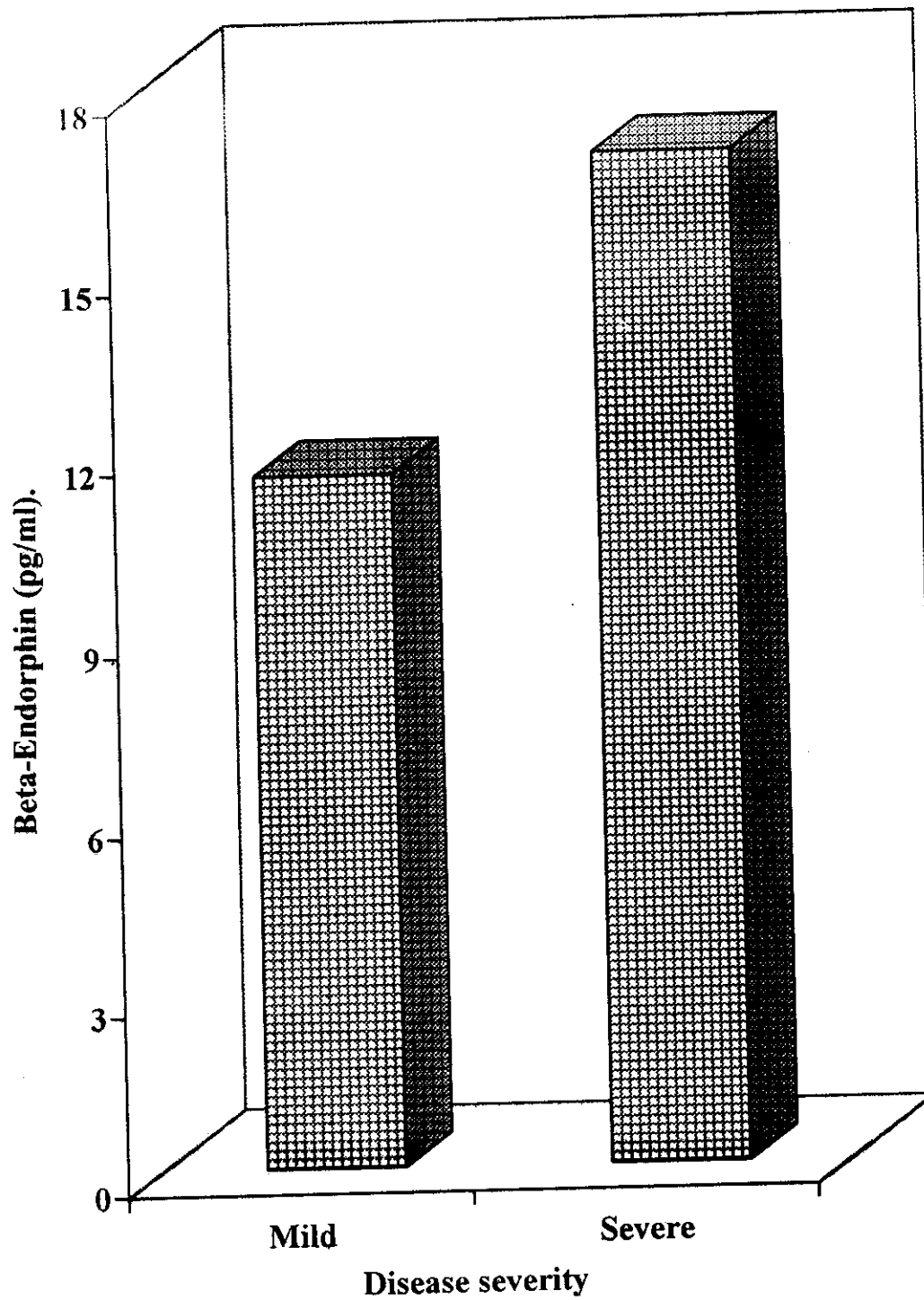
**Figure (2):** Relation between beta-endorphin concentration and the percentage of skin affection in patients with psoriasis.



**Figure (3):** Relation between beta-endorphin concentration and the degree of pruritus in patients with psoriasis.

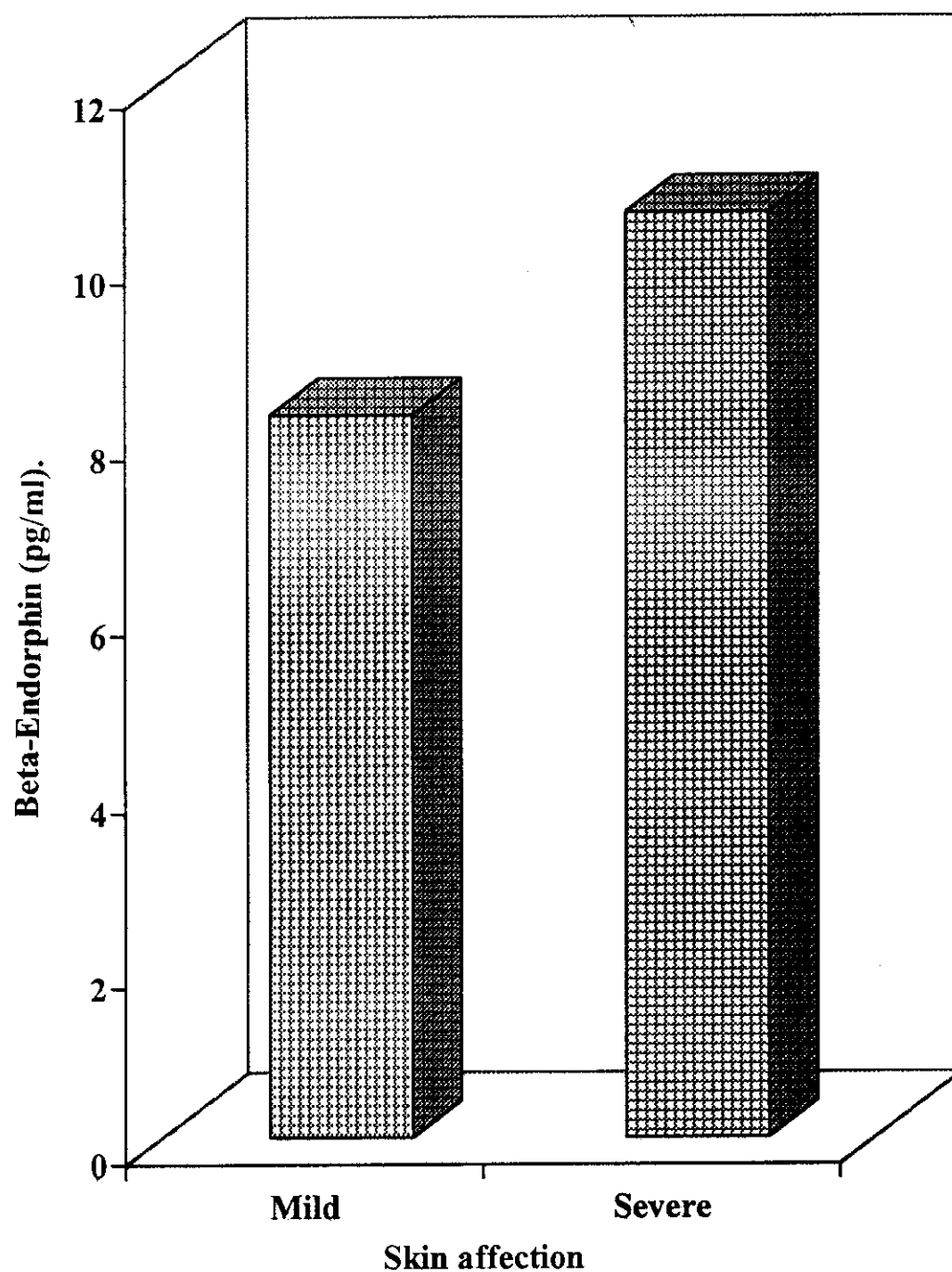


**Figure (4):** Relation between beta-endorphin concentration and severity of psoriasis.

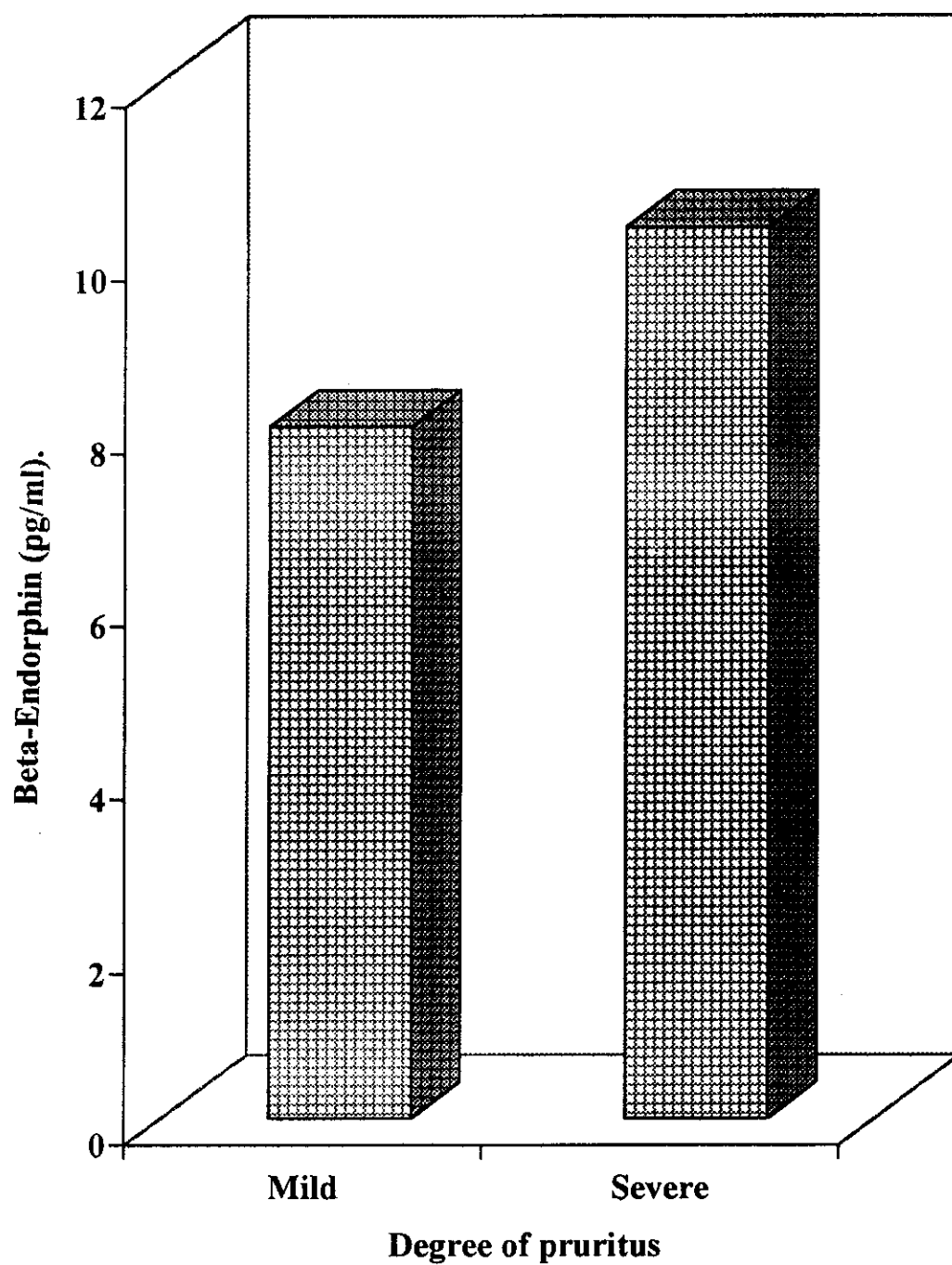




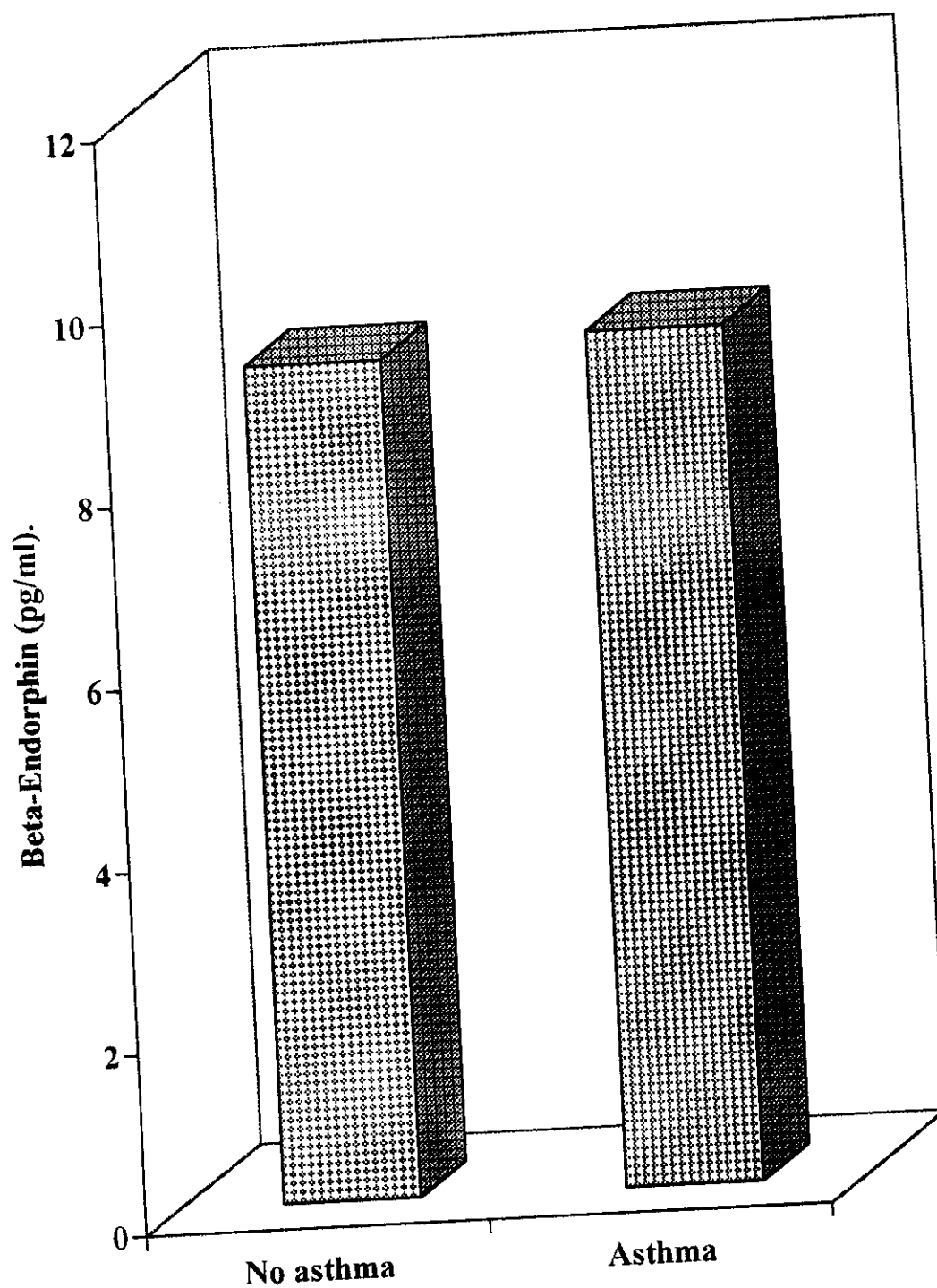
**Figure (5):** Relation between beta-endorphin concentration and the percentage affection in patients with atopic dermatitis.



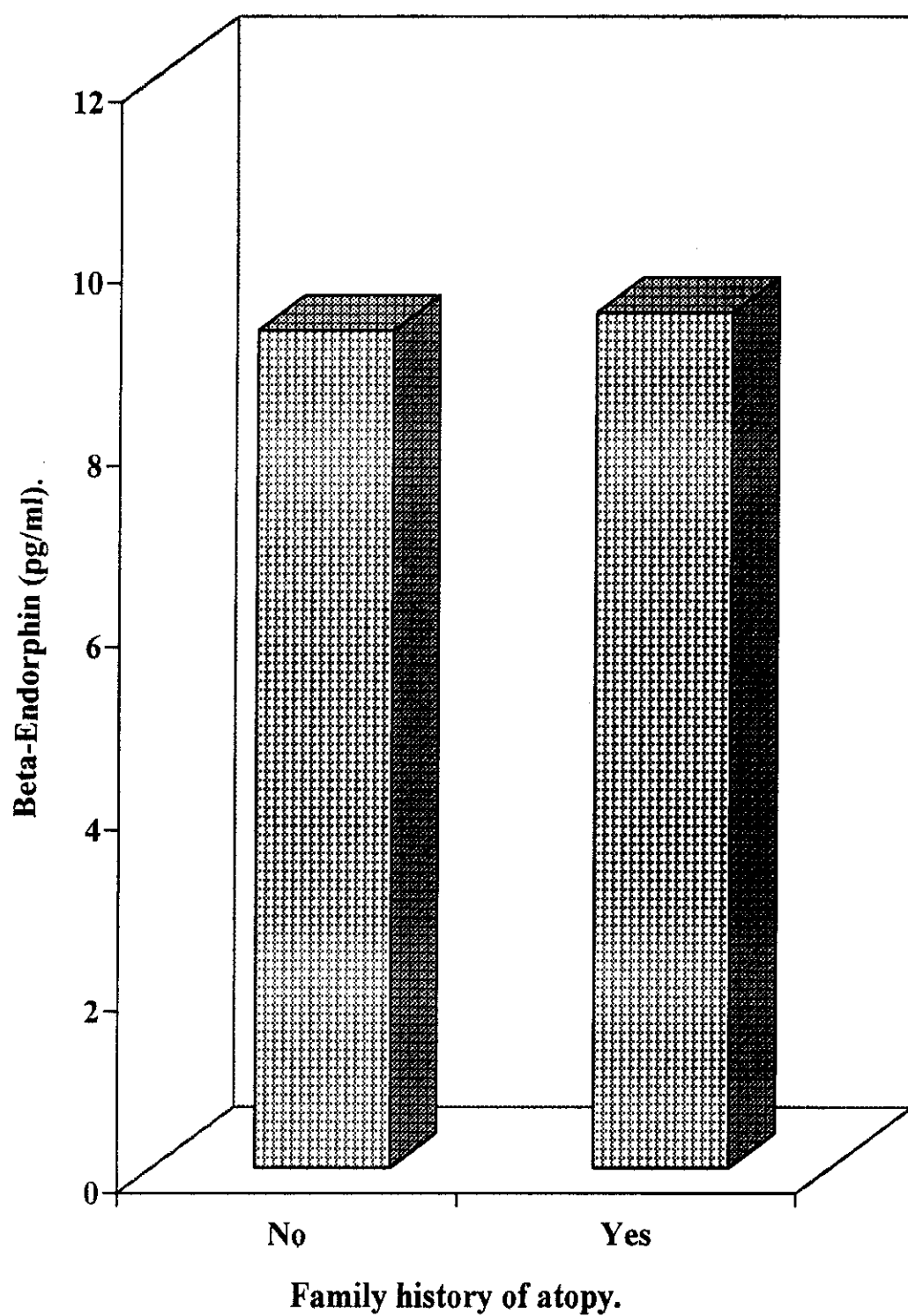
**Figure (6):** Relation between beta-endorphin concentration and the degree of pruritus in patients with atopic dermatitis.



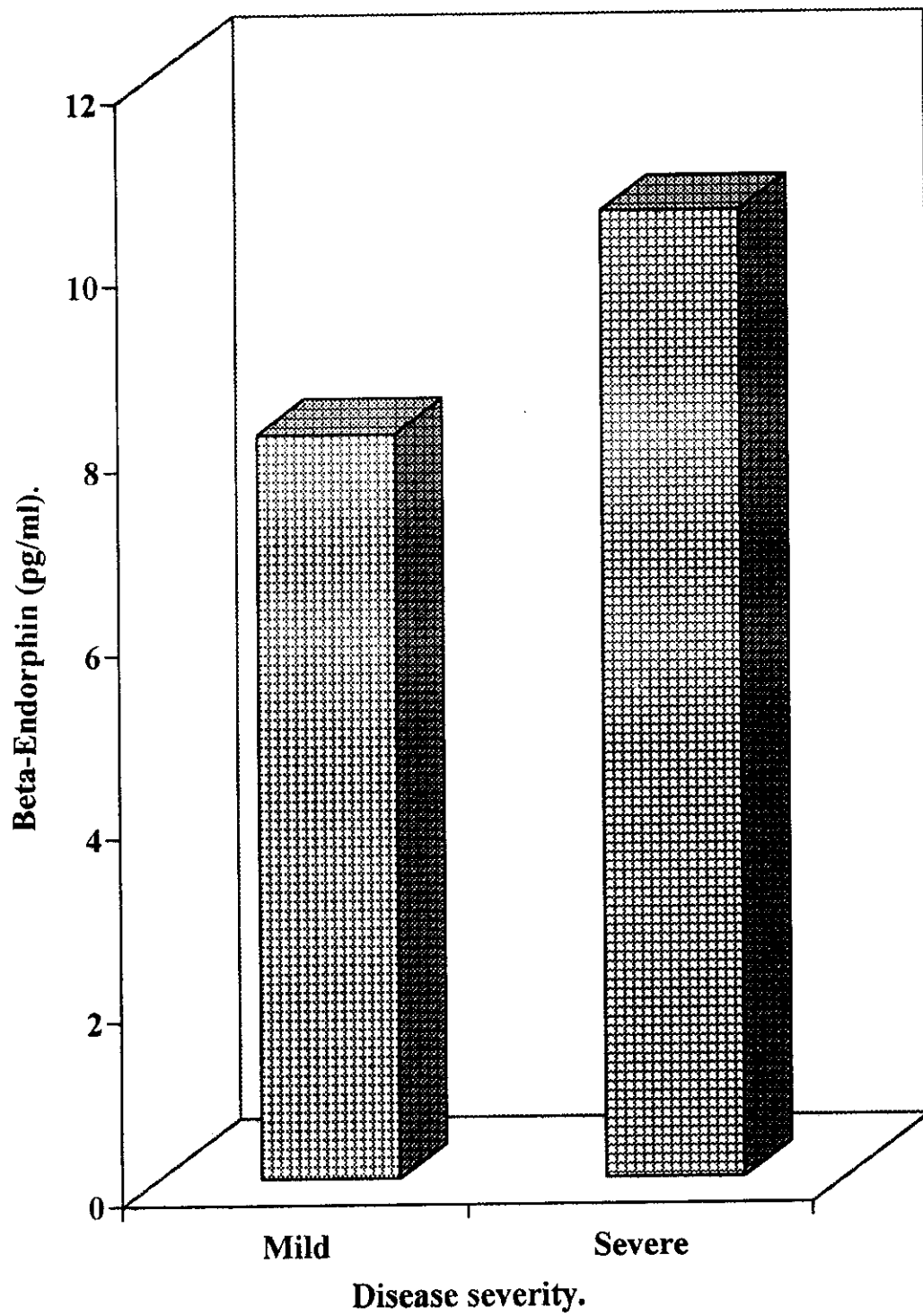
**Figure (7):** Relation between beta-endorphin concentration and the coexistence of asthma in patients with atopic dermatitis.



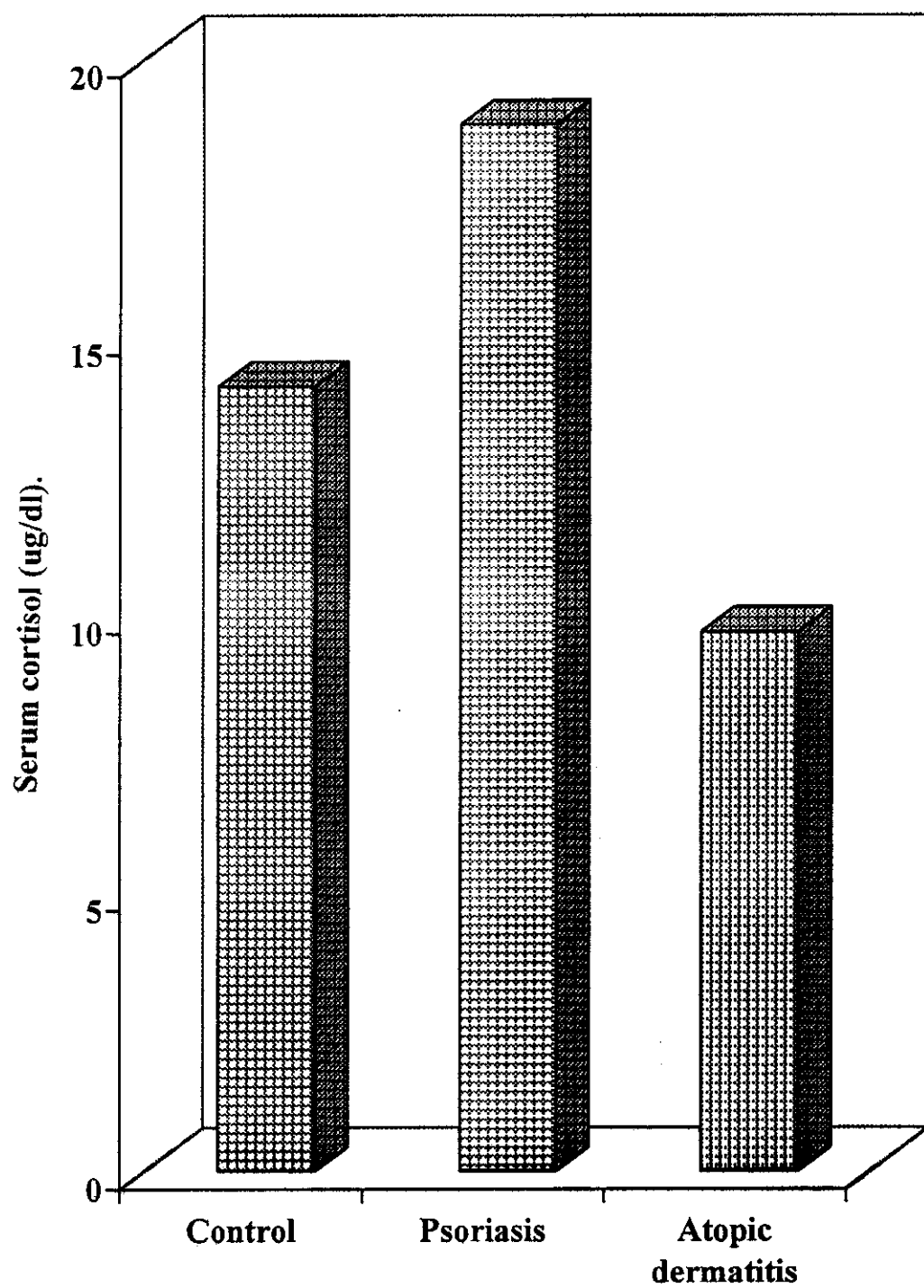
**Figure (8): Relation between beta-endorphin concentration and presence of family history of atopy in patients with atopic dermatitis.**



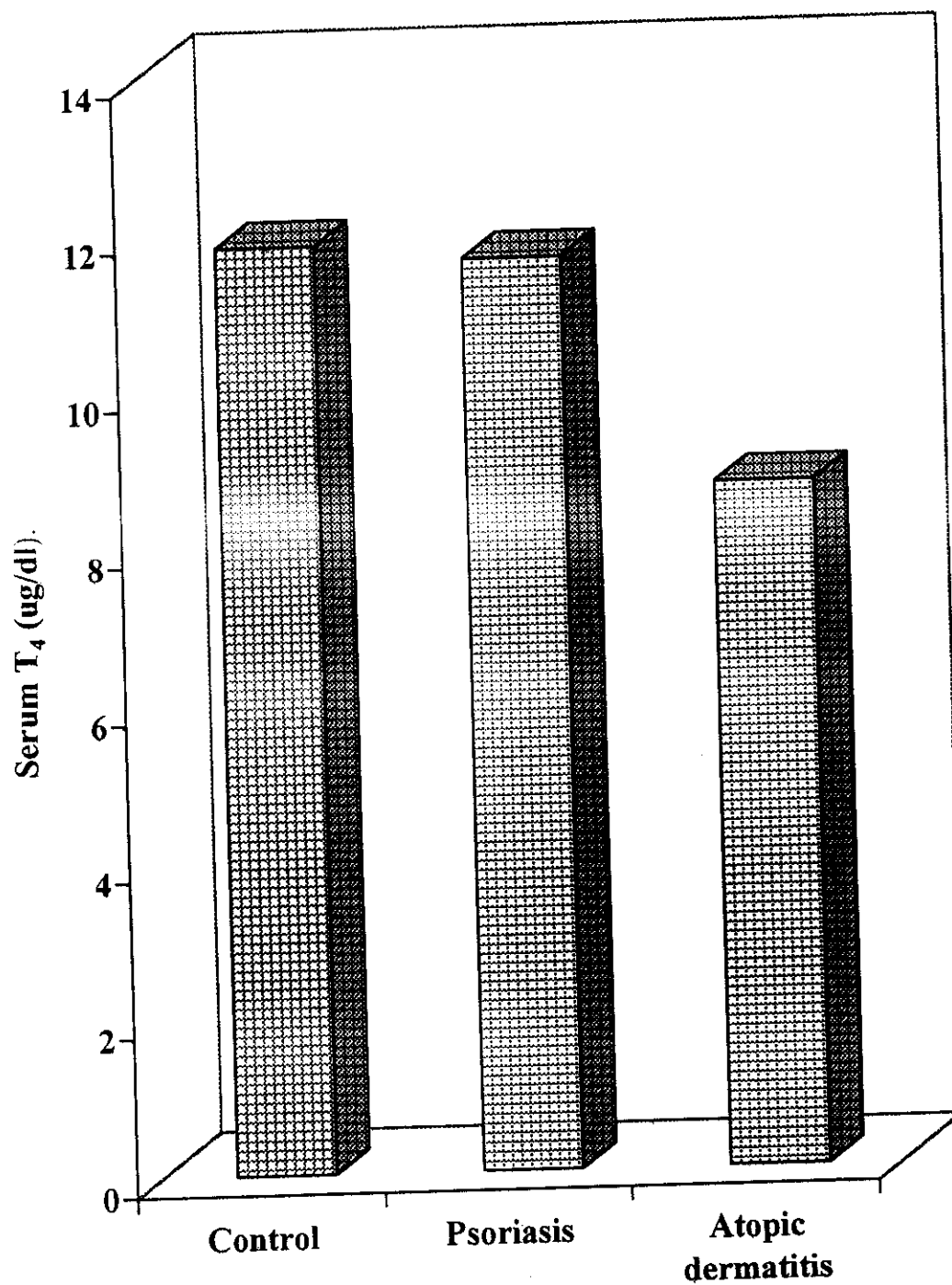
**Figure (9): Relation between beta-endorphin concentration and severity of atopic dermatitis.**



**Figure (10): Serum cortisol concentration in patients with psoriasis and patients with atopic dermatitis versus control.**



**Figure (11): Serum thyroxin (T<sub>4</sub>) concentration in patients with psoriasis and patients with atopic dermatitis versus control.**



**Figure (12): Serum thyroid stimulating hormone (TSH) concentration in patients with psoriasis and patients with atopic dermatitis versus control.**

