Results

This study included thirty patients with extensive alopecia, involving more than 40% of their scalps, they were ten female and twenty male. All of them were selected from those attending the out patient clinic of Benha university hospital, Benha University.

These patients were divided into two groups.

Group (A) : Fifteen patients aged from (18 to 40) years old with mean age 27.9±6.7 years with a duration of the disease varied from (16 to 25) months with a mean of 20.8±2.9 months. This group had been treated with PUVA therapy for 3 months.

Group (B) : Fifteen patients aged from (16 to 40) with mean age 26.4±1.8 years with a duration of the disease varied from (14 to 25) months with a mean of 21.3±2.8 months. Patients with AA > 40% scalp involvement, 4 patients with AT and 4 patients with AU.

This group had been treated with NB-UVB therapy for 3 months.

As regarded group A: after three months of PUVA therapy three patients ($^{3}/_{15}$) 20% gave poor response, three patients ($^{3}/_{15}$) 20% gave mild response, one patient ($^{1}/_{15}$) 6.66% gave good response and eight patients ($^{8}/_{15}$) 53.34% gave excellent response. As shown in fig (1-6).

On the other hand group B: after 3 months of NB-UVB therapy ten patients ($^{10}/_{15}$) 66.7% gave poor response, two patients ($^{2}/_{15}$) 13.3% gave mild response, one patient ($^{1}/_{15}$) 6.67% gave good response, and two patients ($^{2}/_{15}$) 13.3% gave excellent response. As shown in fig (7-12).

The relation between the mean age of the patient at the beginning of treatment and clinical response was insignificant in both groups as shown in tables (3) and (4).

There was no significant relation between the clinical response and the mean duration of the disease in both groups as shown in tables (5) , (6).

There was no significant relation between the clinical response and the type of alopecia in both groups as shown in tables (7) , (8).

Tables (9) , (10) show no significant relation between the clinical response and the sex of patient in both groups.

The comparison between the two groups at the start of hair growth according the mean number of sessions showed significant relation as shown in table (11).

The comparison between the two groups at start of hair growth according to mean dose by joule/cm^2 showed highly significant as shown in table (12).

The comparison between the mean of the total cumulative dose of the two groups showed that, the relation was highly significant as shown in table (13).

The relation between the poor results in both groups was highly significant, it was also significant between the excellent results in both groups, the comparison didn’t give statistical relation in mild results, the same happened when we compared the good results of both therapies as shown in table (14).

Follow up results of group A six months after stoppage of the therapy showed that three patients of the eight who gave excellent results developed patches of hair loss. Two patients of them developed complete hair loss while three patients showed no hair loss. The patient who gave good response developed complete hair loss. Two of the three patients who gave mild response developed complete hair loss while one patient showed no hair loss. Two of the three patients who gave poor results showed complete hair loss while the patient who showed no response still the same as shown in table (15).

On the other hand follow up of group B showed that one of the two patients who gave excellent responses developed no hair loss and the other developed patches of hair loss. The patient who gave good responses showed patches of hair loss. The two patients who gave mild response showed patches of hair loss. As regard the ten patients who gave poor response, one of them didn’t show any hair loss, four of them showed complete hair loss and the remaining five patients who gave no response still the same, as shown in table (16).

During the course of treatment, 4 patients of group A and 3 patients of group B complained of mild burning erythema so we stopped two sessions then continue by repeating the previous dose. While 3 patients of group A and 3 patients of group B complained of mild itching which was relived by using antipururitic. 2 patients of group A complained of mild nausea which disappeared after 2 days without any interference. On the other hand 4 patients of group B complained of dryness whish was relieved by using an emollient.

Table (3) shows that the relation between clinical response by PUVA and the mean age at the start of treatment per years.

Response / Mean age	Poor	Mild	Good	Excellent	F	P
Mean age (years)	27.3	28.3	28.0	28.0	0.009	0.99
SD	9.1	3.1	0	8.1		

not significant as p value is > 0.04

Table (4) shows that the relation between clinical response by NB-UVB and the mean age at the start of treatment per years.

Response / Mean age	Poor	Mild	Good	Excellent	F	P
Mean age (years)	26.1	26.5	38.0	22.0	0.86	0.48
SD	8.3	10.6	0			

is not significant as p value is > 0.04

Table (5) shows that the relation between clinical response and the mean duration of the disease of PUVA therapy per months.

Clinical response	**Poor**	**Mild**	**Good**	**Excellent**	**Total**
Mean duration (months)	21.3	20.3	22	20	20.8
SD	3.5	2.08	-	3.46	2.93
F	0.1				
P	0.958				

is not significant as p value is > 0.04

Table (6) shows that the relation between clinical response and the mean duration of the disease of NB-UVB therapy per months.

Clinical response	**Poor**	**Mild**	**Good**	**Excellent**	**Total**
Mean duration (months)	22.1	22.5	18	18	21.33
SD	2.3	2.1	-	4.2	2..8
F	2.153				
P	0.151				

is not significant as p value is > 0.04

Table (7) shows that the relation between type of alopecia and the clinical response of PUVA

Response / Type of alopecia	Poor	Mild	Good	Excellent	Total	X2	P
AA >40%	1 6.66%	2 13.33%	0 0%	4 26.67%	7 46.66%	4.1	0.66
totalis	1 6.66%	1 6.66%	0 0%	2 13.33%	4 26.66%		
Unversalis	1 6.66%	0 0%	1 6.66%	2 13.33%	4 26.66%		

is not significant as p value is > 0.04

Table (8) shows that the relation between type of alopecia and the clinical response of NB-UVB

Response / Type of alopecia	Poor	Mild	Good	Excellent	Total	X2	P
AA >40%	2 13.33%	2 13.33%	1 6.66%	2 13.33%	7 46.66%	15.0	0.09
totalis	4 26.67%	0 0%	0 0%	0 0%	4 26.66%		
Unversalis	4 26.67%	0 0%	0 0%	0 0%	4 26.66%		

is not significant as p value is > 0.04

Table (9) shows that the relation between sex and clinical response of PUVA

Response / sex	Poor	Mild	Good	Excellent	Total	X2	P
Male	2 13.33	3 19.98%	1 6.66%	5 33.3%	11 73.33%	2.0	0.57
Female	1 6.66%	0 0%	0 0%	3 19.98%	4 26.67%		

is not significant as p value is > 0.04

Table (10) shows that the relation between clinical response and sex of NB-UVB

Response / sex	Poor	Mild	Good	Excellent	Total	X^2	P
Male	7 46.62%	1 6.66%	0 0%	1 6.66%	9 60%	2.08	0.55
Female	3 19.98%	1 6.66%	1 6.66%	1 6.66%	6 40%		

is not significant as p value is > 0.04

Table (11) shows that the relation between PUVA and NB-UVB at start of hair growth according to the mean number of sessions.

	Mean number of sessions	**S.D**	**t**	**P**
PUVA	8.46	2.84	2.67	0.01
NB-UVB	12.8	4.8		

is significant as p value is < 0.04

Table (12) shows that the relation between PUVA and NB-UVB at the start of hair growth according to mean dose by J/cm2

	Mean dose by J/cm^2	**S.D**	**T**	**P**
PUVA	22.5	10.2	3.34	0.003
NB-UVB	11.3	2.8		

is highly significant as P value < 0.04

Table (13) shows that the relation between PUVA and NB-UVB according to mean of the total cumulative dose by J/cm2

	Mean of the total cumulative dose	**S.D**	**T**	**P**
PUVA	100.6	39.0	3.9	0.001
NB-UVB	59.4	8.4		

is highly significant as P value < 0.04

Table (14) shows that the relation between PUVA and NB-UVB according to clinical response after 3 months of beginning therapy.

Response / Treatment	Poor	Mild	Good	Excellent	Total
PUVA	3 20%	3 20%	1 6.66%	8 53.34%	15 100%
NB-UVB	10 66.7%	2 13.3%	1 6.67%	2 13.3%	15 100%
X^2	6.65	Fisher exact	Fisher exact	5.4	
P	0.009	1.0	1.0	0.02	

is significant in excellent results as P value is lower than 0.04

and is highly significant in poor results as P value is very lower than 0.04

Table (15) shows that the relation between results after 3 months of PUVA therapy and follow up for 6 months

Follow up after 6 months / Result after 3 months	No response	Complete hair loss	Patches of hair loss	No hair loss	Total	X2	P
Excellent	0 0%	2 13.33%	3 20%	3 20%	8 53.34%	10.0	0.34
Good	0 0%	1 6.66%	0 0%	0 0%	1 6.66%		
Mild	0 0%	2 13.33%	0 0%	1 6.66%	3 20%		
Poor	1 6.66%	2 13.33%	0 0%	0 0%	3 20%		

is not significant as P value > 0.04

Table (16) shows that the relation between results after 3 months of therapy of NB –UVB and follow up for 6 months

Follow up after 6 months / Result after 3 months	No response	Complete hair loss	Patches of hair loss	No hair loss	Total	X2	P
Excellent	0 0%	0 0%	1 6.66%	1 6.66%	2 13.33%	16.1	0.07
Good	0 0%	0 0%	1 6.66%	0 0%	1 6.66%		
Mild	0 0%	0 0%	2 13.33%	0 0%	2 13.33		
Poor	5 33.36%	4 26.7%	0 0%	1 6.66%	10 66.6%		

is not significant as P value > 0.04