

ETANERCEPT IN CHRONIC PLAQUE PSORIASIS

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ABSTRACT

Psoriasis is a chronic inflammatory disease with frequent relapses and remissions. The introduction of biologics increased the remission periods, decreases relapse and hence improve the quality of life.

Method: The study includes 17 adult patients of chronic plaque psoriasis, who received etanercept subcutaneously at a dosage of 50 mg once weekly for 24 weeks, followed by 6 months follow up.

Results: At the end of 12 weeks 8 patients (47.05%) achieved more than 75% reduction of PASI and at the end of 24 weeks 9 patients(52.94%) achieved more than 75% reduction of PASI.

Conclusion: Our study shows that etanercept has good efficacy without any significant side effects and it should be considered in patients with moderate to severe chronic plaque psoriasis not responding to other conventional modes of therapy.

INTRODUCTION

Psoriasis is a chronic inflammatory skin condition affecting approximately 2 % of the general population.^(1,2) Even though it has several clinical variants, chronic plaque type is the commonest that presents with silvery white scales on an erythematous base. Some patients may have associated joint involvement. The pathogenesis of psoriasis is complex it includes both innate and adaptive immune systems. Cytokines Th1 and Th17 cells have been incriminated in the pathogenesis of psoriasis.⁽³⁾ These cytokines secrete TNF- α and IFN- α that leads to vasodilatation, leukocyte migration and keratinocyte activation. This leads to activation of dendritic cells that creates a repeated cycle of inflammation.

Biologics are the agents that targets genetic or immune mediator of pathophysiological process.. Among the biologics Infliximab, Etanercept, and Adalimumab targets TNF- α . Etanercept is a human fusion protein of the TNF receptor to Fc portion of IgG which binds to TNF- α to neutralize its effects. Various international studies have showed etanercept has good efficacy in chronic plaque type of psoriasis. With this background we conducted a study on efficacy of etanercept in chronic plaque psoriasis.

Table 1: Baseline PASI Score

NO:	AGE/SEX	BASELINE PASI
1	32/F	25
2	29/M	20
3	68/M	30
4	50/M	15
5	40/F	23
6	41/M	17
7	47/M	30
8	34/F	29
9	55/F	28
10	50/M	15
11	57/M	12.2
12	42/M	26.2
13	32/M	14.5
14	47/M	23.7
15	64/M	15.2
16	23/M	27
17	38/F	30

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METHODS

Study was conducted in Dermatology department at Coimbatore Medical College from September 2011-August 2012 which constitutes 6 months of therapy and 6 months of follow up. Patients were selected based on the following inclusion criteria: a) Chronic plaque psoriasis, b) more than 18 years of age, c) PASI 10 or more than 10. The exclusion criteria includes a) Patients with active infections like Tuberculosis, HIV, Hepatitis B and C, b) Patients on phototherapy, and c) Pregnant women & children.

Seventeen patients were selected for the study based on inclusion and exclusion criteria. They were admitted in the skin ward. All the patients underwent blood investigations which included complete hemogram, liver function test, renal function test, urine routine and x ray chest to rule out pulmonary tuberculosis.

Baseline PASI was done for all the patients (Table 1) by taking into account erythema, induration and scaling, and body surface area). Patients were given subcutaneous injection of etanercept 50 mg once in a week for a period of 24 weeks. No other topical or systemic drugs for psoriasis were added during the study period. Essential investigations were done once in a month for the next 6 months. PASI score was done at the end of 12 weeks and 24 weeks to assess the treatment response. Patients were then followed up for the next six months.

Statistical analysis

Mean values of PASI score was compared by using paired T TEST. The Statistical Package used was SPSS Version 19.0

RESULTS

Out of 17 patients 12 were male and 5 were female (Table 2). Two patients were in the age

Table 2: Gender Percentage

Gender	Number	Percentage
Male	12	70.6
Female	5	29.4
Total	17	100

group 18-30 yrs, nine were in the age group 30 yrs - 49 yrs and four were in the age group 51 to 70 yrs. (Table 3). One female lost follow up and one male developed erythroderma. Fifteen patients out of 17 were followed up for the next 6 months. Psoriasis

Table 3: Age Percentage

Age group	Number	Percentage
18-29	2	11.8
30-39	4	23.5
40-49	5	29.4
50-59	4	23.5
>59	2	11.8
Total	17	100

Table 4: PASI score at the end of 12 weeks and 24 weeks

NO:	BASE-LINE PASI	PASI 12 WEEKS	PASI 24 WEEKS
1	25	13	8
2	20	9	5
3	30	7.5	3
4	15	3	2
5	23	Lost follow up	
6	17	6	2
7	30	12	7
8	29	17	12
9	28	7	4.8
10	15	7.5	3
11	12.2	Developed erythroderma	
12	26.2	13	6.5
13	14.5	7.2	3.2
14	23.7	11.8	4.8
15	15.2	9.2	3.7
16	27	10	4
17	30	10	7

recurred in two patients in the 5th and 6th month of follow up,

Mean baseline PASI was 23.04 and it was 9.55 at 12 weeks and 5.07 at the end of 24 weeks (Table 4).

Table 5:Reduction of PASI at the end of 12 weeks and 24 weeks

No	Baseline pasi	Pasi 12 weeks	Reuction of pasi in percentage	Pasi 24 weeks	Reduction of pasi
1	25	13	48	8	68
2	34	7	79	5	85
3	30	7.5	75	3	90
4	15	3	80	2	87
5	23		LOST FOLLOW UP		
6	30	7	76	5	83
7	40	9	77	4	90
8	29	17	41	12	58
9	28	7	75	4.8	83
10	15	7.5	50	4	73
11	12.2		DEVELOPED ERYTHRODERMA		
12	39	9	77	6.5	83
13	14.5	7.2	50	4	72
14	23.7	11.8	50	7	70
15	36.2	9.2	75	3.7	89
16	27	10	63	7	74
17	30	10	66.67	5	83

The p value between baseline PASI and PASI at 24 weeks was 0.0001 which was stasticaly significant.

At the end of 12 weeks 8 patients (47.05%) achieved more than 75%reduction of PASI and at the end of 24 weeks 9 patients(52.94%) achieved more than 75% reduction of PASI. All the above nine patients showed reduction of PASI from 80 – 90 %(**Table 5**) (**Figure 1,2**).

DISCUSSION

Etarncept is one of the biological used in psoriasis. It is a FD ; for chronic psias and ç After 12wks The mechanism of action is by direct binding to TNF molecule in the blood and tissue and there by

prevents its activity. Etarncept is given as a subcutaneous injections (thighs, upper arm, abdomen) in the dose of 50mg twice weekly for the first twelve weeks and then once weekly. Mild to moderate redness, swelling, itching and pain are the common injection site reactions.

Leonardi CL et al used etarncept 50mg twice per week and reported PASI 75 response in 49% f patients after 12 weeks⁽⁴⁾. used etarnace Before ice per wk After 24wks % of patient achieved PASI 75 at the end or 12 weeks⁽⁵⁾. The Pristine trial reported 78% PASI 75 by 24 weeks⁽⁶⁾. Our study showed 53% of PASI reduction75 % at

Figure 1: Before and after treatment at the end of 12 weeks



Figure 2: Before and after treatment at the end of 24 weeks



Statistical analysis

	Mean	S.D.	SEM	t value	P value
Baseline PASI	23.04	6.2	1.6		
PASI 12 weeks	9.55	3.5	0.9	10.241	0.0001

	Mean	S.D.	SEM	t value	P value
Baseline PASI	23.04	6.2	1.6		
PASI 24 weeks	5.07	2.7	0.7	13.826	0.0001

	Mean	S.D.	SEM	t value	P value
PASI 12 weeks	9.55	3.5	0.9		
PASI 24 weeks	5.07	2.7	0.7	11.008	0.0001

ANOVA
VAR00006

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2625.906	2	1312.953	67.901	.000
Within Groups	812.127	42	19.336		
Total	3438.032	44			

the end 24 weeks which is comparable with the above study.

The advantages of etanercept are its dosing schedule and less common side effects. The limitation of its usage is the cost factor.

Since our study had very small sample size and the Patients were followed up for only 6 months, we were not able to calculate the exact remission period.

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