



## Chapter V

### Results

Fourteen patients enrolled in this study. The first three, however, failed to complete the entire trial because of difficulties in transportation.

Of the eleven remaining patients, 7 were male and 4 were female (table I). Patients' age ranged from 17 to 37 years, with mean age of 22. Body weight is shown in table I.

All patients were of good health and without any concurrent disease or concomitant treatment. Some patients had used other treatment modalities with variable results (table II).

Number and size of lesions are listed in table III. Patients harbored from 12 to 76 lesions ( mean = 30.82 lesions per person ). Duration of infection ranged from 1 month to 15 years ( mean = 40 months, table III ).

Of the eleven patients, 7 had verrucae vulgares, 3 had verrucae plantares and one had verruca plana ( table III ). Initial laboratory examinations which included complete blood cell count and serum uric acid levels were within normal limits (table IV). Two patients ( pt. no. 5 & 6 ) had marginally high values of serum uric acid levels.

Skin biopsies were done at initial visit on 6 patients.  
Repeated biopsies were done on 2 patients who showed clinical  
response and 2 who did not.



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Table I Patients' Characteristics

Patient No.	Sex	Age	Body weight	Occupation
1*	F	12	42	student
2*	M	5	14	-
3*	F	20	47	employee
4	F	22	46	nurse
5	M	17	65	student
6	M	37	52	employee
7	M	18	52	student
8	M	17	52	employee
9	M	22	46	employee
10	M	19	55	student
11	F	21	50	employee
12	F	18	42	employee
13	F	30	42	nurse
14**	M	14	42	student
15	M	21	60	student

\* lost to follow-up

\*\* still under treatment, not included in report



Table II Previous Treatments

Patient No.	Previous Treatment	Response
1	none	-
2	none	-
3	shaving	recurrence
4	clindamicin	no response
5	cryotherapy, TCA, previous Inosine Pranobex	no response
6	TCA, DNCB	no response
7	cutting	returrence
8	unspecified topical lotion	no response
9	electric cautery	recurrence
10	Collomack	partial response
11	none	-
12	cigarette	partial response
13	none	-
15	Duofilm	partial response

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Table III Characterizations of Lesions

Pt. No.	No. of Lesions	Size(mm.)	Duration(mo.)	Type	Site
4	57	4	6	plantar	soles
5	16	3	24	common	face
6	61	10	180	common	hands
7	30	3	36	common	hands
8	76	6	36	common	legs
9	14	3	96	common	legs
10	12	4	24	common	hands
11	13	4	1	plantar	soles
12	26	4.5	1	common	palms
13	18	4	24	plantar	soles
15	16	3	>12	plane	face

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Table IV Initial Laboratory Examinations

Patients No.	Hb	WBC	PMN	L	B	M	EO	Uric Acid
4	13.0	7,000	62	36	-	-	2	5.6
5	15.0	11,300	30	42	1	-	27	7.1
6	14.5	6,800	51	47	-	2	-	7.5
7	15.2	5,100	49	49	-	2	-	6.2
8	13.3	9,800	42	21	-	3	34	5.4
9	-	-	-	-	-	-	-	6.3
10	14.7	6,400	49	46	1	-	4	6.5
11	14.4	8,200	57	41	2	-	-	2.5
12	11.3	8,800	53	36	1	-	10	2.5
13	11.5	5,700	47	53	-	-	-	5.1
15	15.3	4,400	60	38	-	1	1	5.3

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 คณะพยาบาลศาสตร์ มหาวิทยาลัย

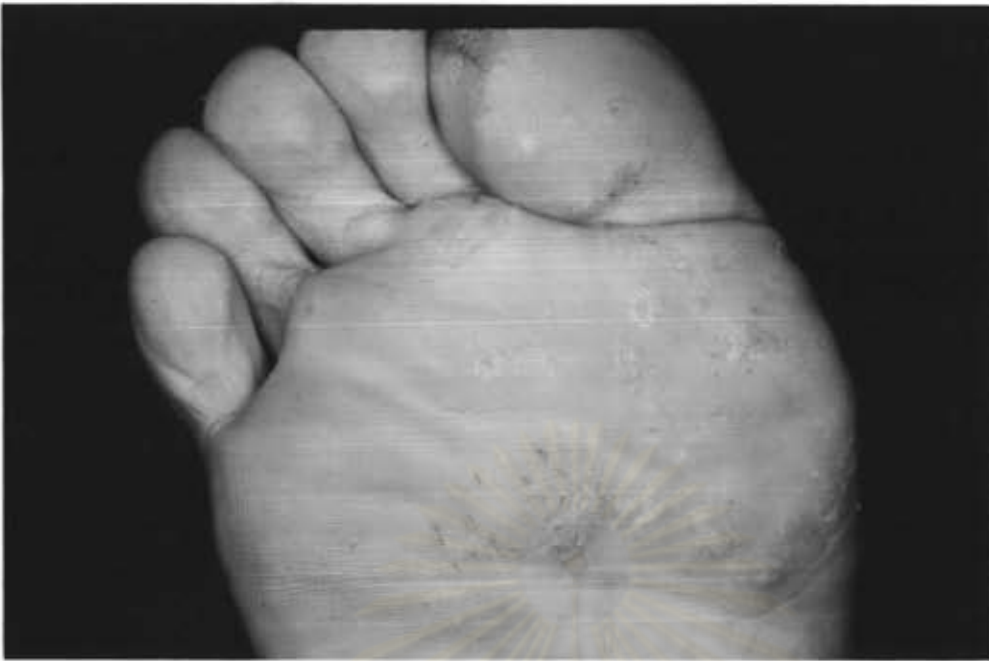


Fig. 1 patient No. 4 on day 0



Fig 2 Patient No. 4 on day 28





Fig 3 Patient No. 4 on day 56: note complete clearing of lesions



Fig 4 Patient No. 5 on day 0: Lesions increased in number at the end of treatment





Fig 5 - 6 Patient No. 6 on day 0: Lesions remained unchanged all through the study period.



Fig 7 Patient No. 8: day 0



Fig 8 Patient No. 8: day 14



Fig 9 Patient 8: day 56: complete clearing of lesions with residual hypopigmentation



Fig 10 Patient No. 11 : day 0



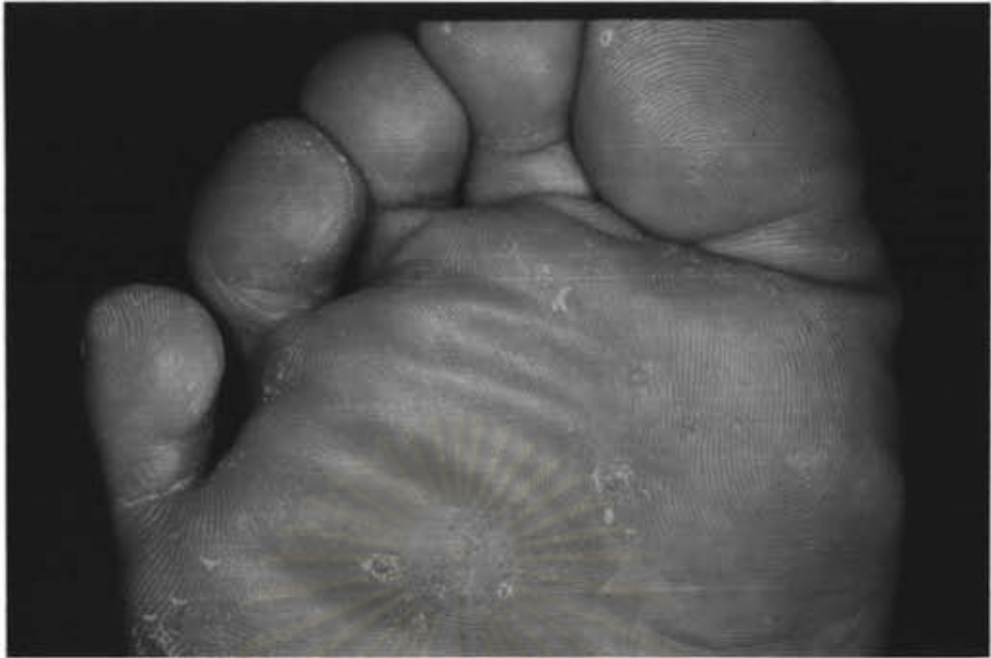


Fig 11 Patient No. 11: day 14

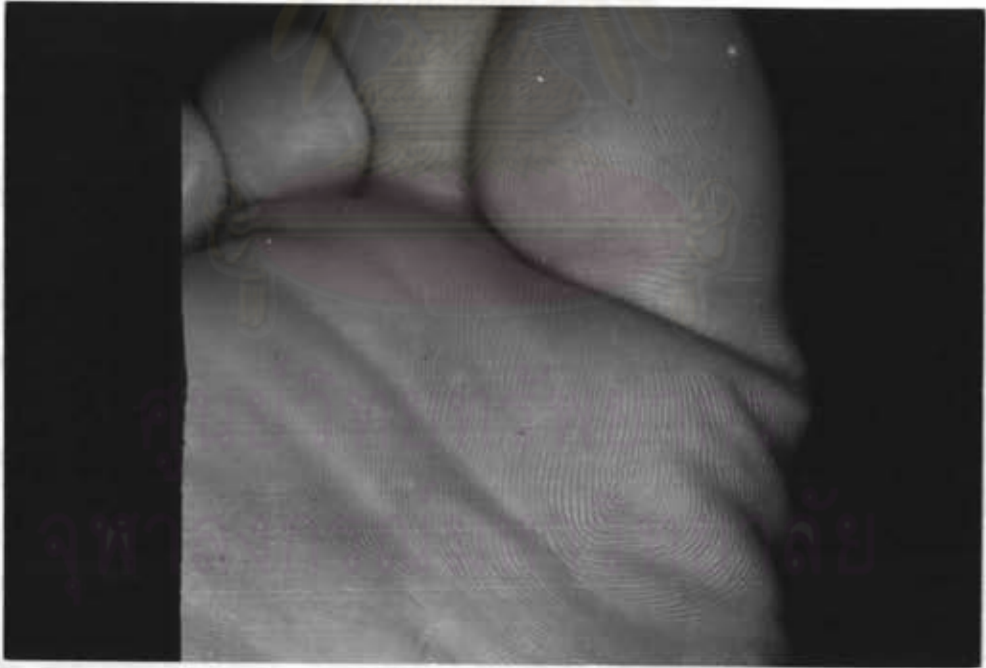


Fig 12 Patient No. 11: day 56



Fig 13 Patient No.12: day 0



Fig 14 Patient No. 12: day 42

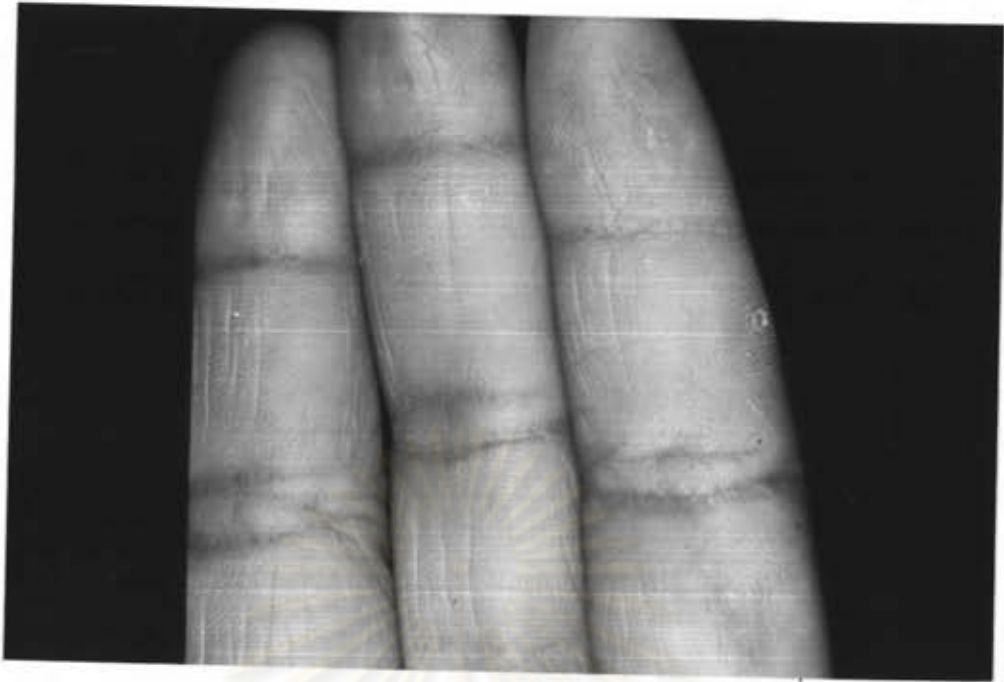


Fig 15 Patient 12: day 56



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Seven out of eleven patients showed complete clearing of lesions at the end of treatment. All these patients graded the treatment as very acceptable in terms of convenience and favorable results. Also, of interest, is that the therapeutic response was seen as early as 2 weeks after commencement of treatment in all these 7 patients.

Of the seven who had complete resolution, 3 had verrucae vulgares, 3 had verrucae plantares and one had verruca plana. Mean duration of infection in these patients was 25.14 months ( range 1 - 96 months ).

Upon healing, all lesions showed flattening and reduction in size. No accompanying signs of inflammation or necrosis were seen.

One patient showed no response to treatment. This patient ( no. 6 ) had had the lesions for 15 years. He had been treated by several unsuccessful treatment modalities ( table II ) including many sessions of DNCB challenge. However, after the discharge from the study, he was treated with combination of cryotherapy, surgery, TCA application and DNCB with complete resolution.

One patient ( pt. no. 7 ) had a partial response to treatment. His lesions were reduced in number and flattened. He failed to follow-up after treatment ended. Patients nos. 5 and 10 had more lesions at the end of treatment ( chart I ). It

should be noted that Inosine pranobex had previously been used in patient no. 5 at the dosage of 1,500 mg/day for over one month without success.



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Chart I : Response to Treatment

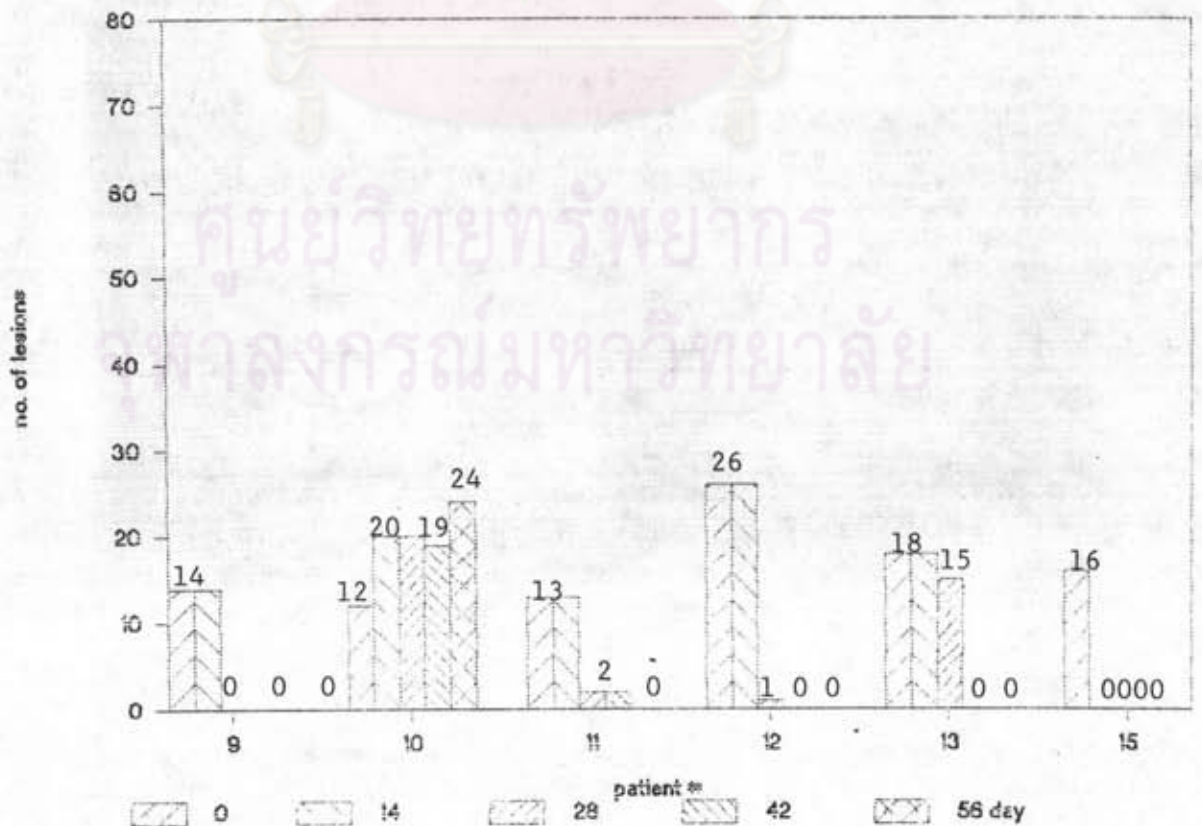
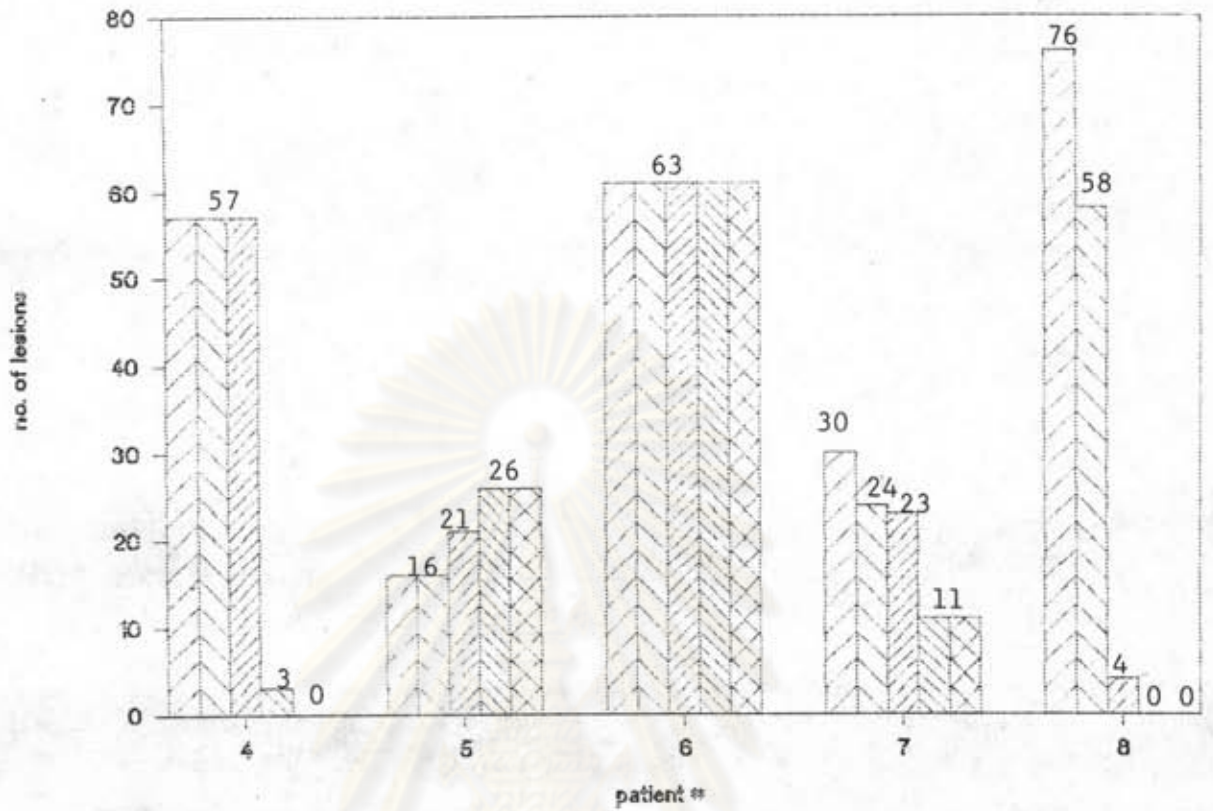
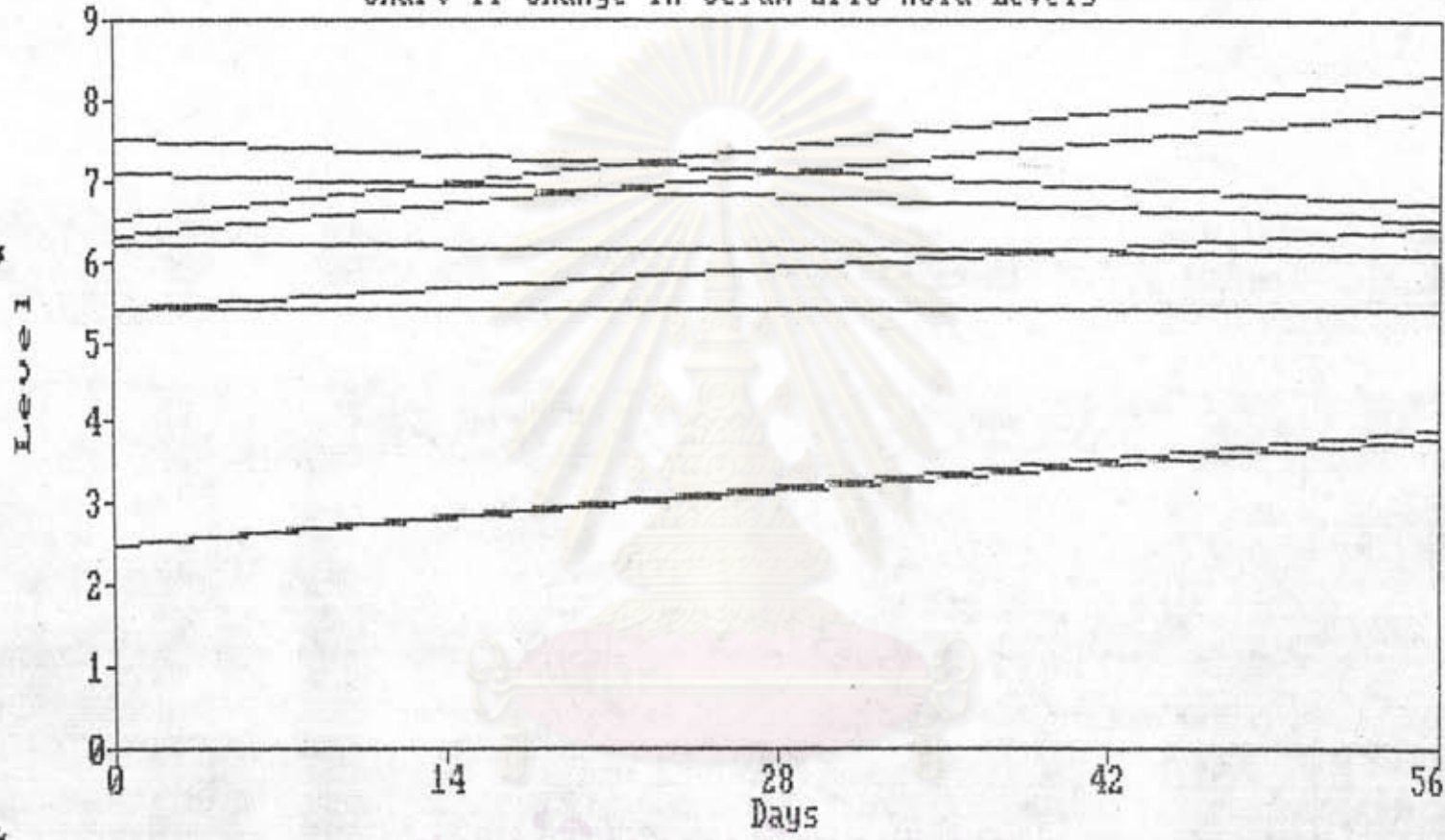




Chart II Change in Serum Uric Acid Levels



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By paired-t comparison, the number of lesions was found to be statistically significantly reduced at the end of the 8-week therapy (  $p < 0.05$  ).

Serum uric acid levels rose in 5 patients, reduced in 3 and remained unchanged in 1 ( Only nine patients had a repeated serum uric acid determination. ). This rise was statistically significant ( $p < 0.05$ ). (Chart II)

Immunoperoxidase tissue sections demonstrated that there was an increase in number of OKT-4 and OKT-8 positive cells and in expression of HLA-DR and IL-2 receptors in patients who showed clinical remission. The presence of cellular infiltrate in these patients were, however, present prior to treatment (figures 16 through 32). In patients whose warts were unresponsive to treatment there was only slight or no increase in such cellular infiltrate (figures 33 through 44).

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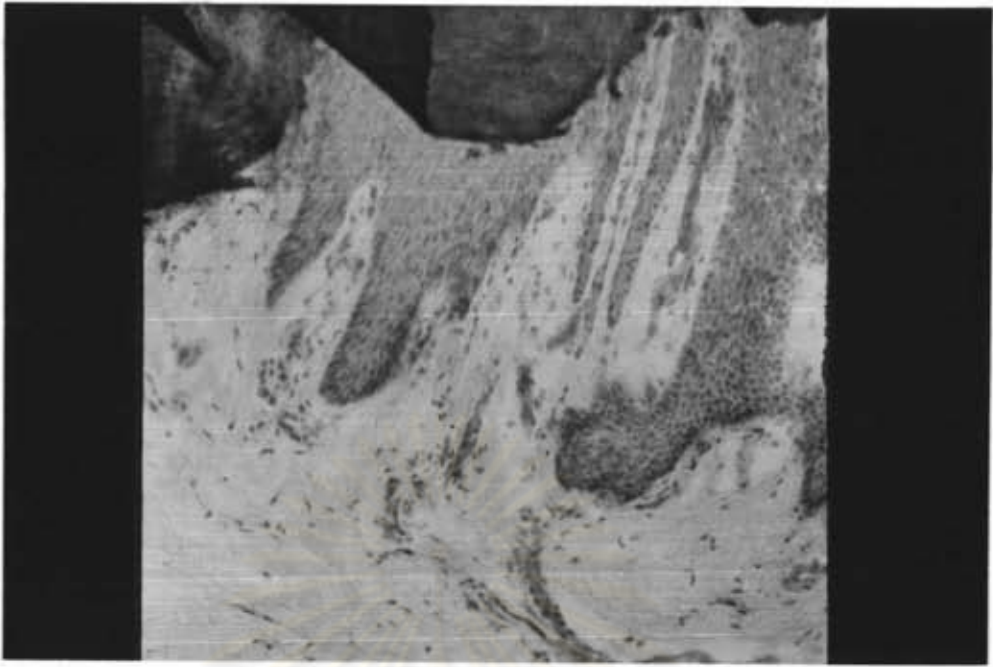


Fig 16 Immunoperoxidase staining for OKT-4 cells in patient No. 12 on day 0

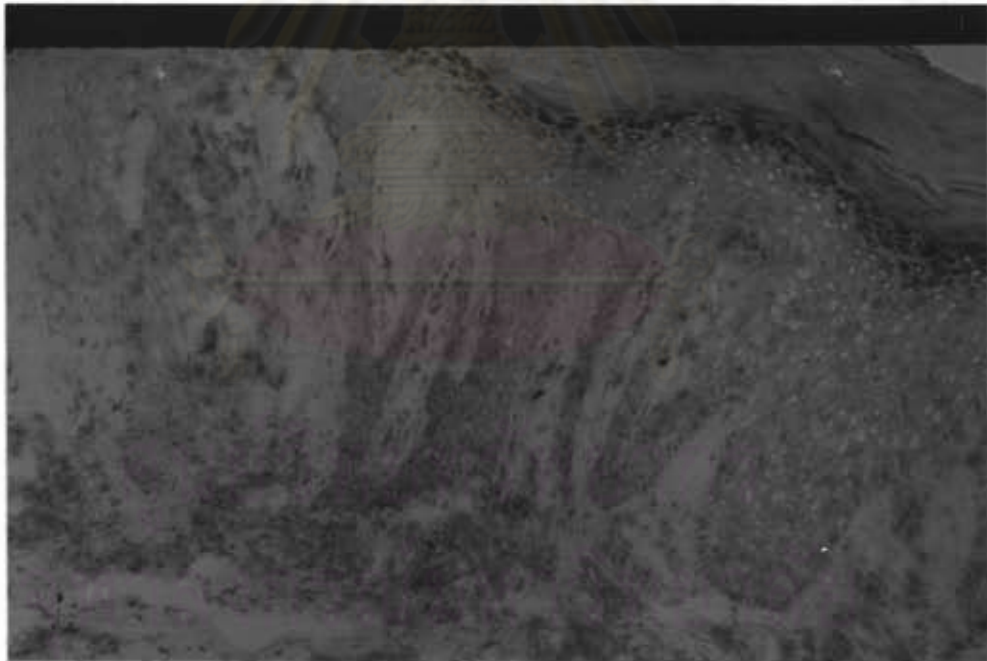


Fig 17 Immunoperoxidase staining for OKT-4 cells in patient No. 12 on day 42



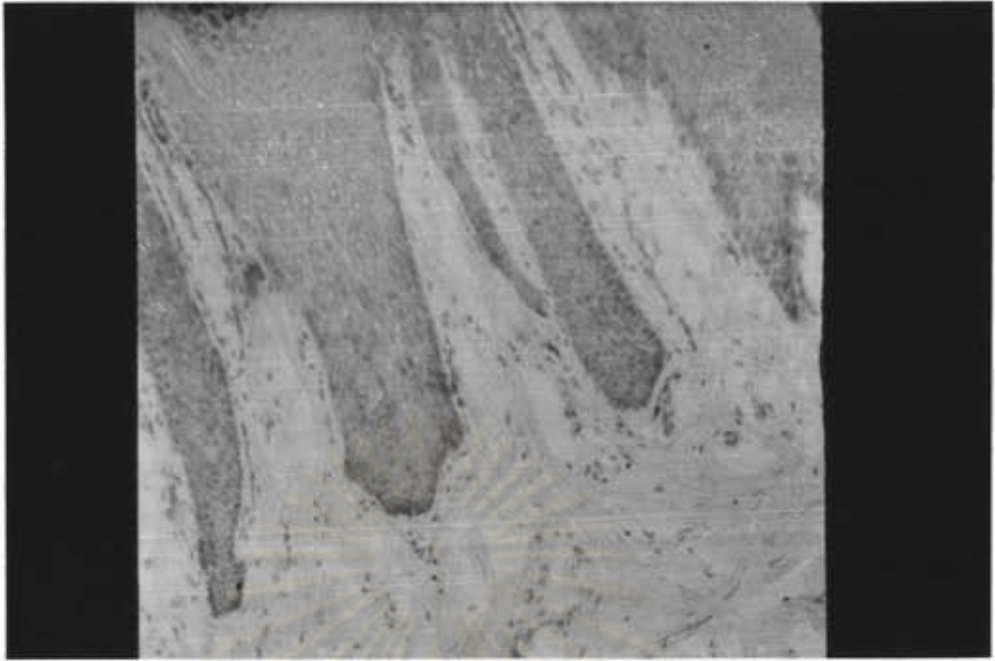


Fig 18 OKT-8-positive cells in patient No. 12: day 0

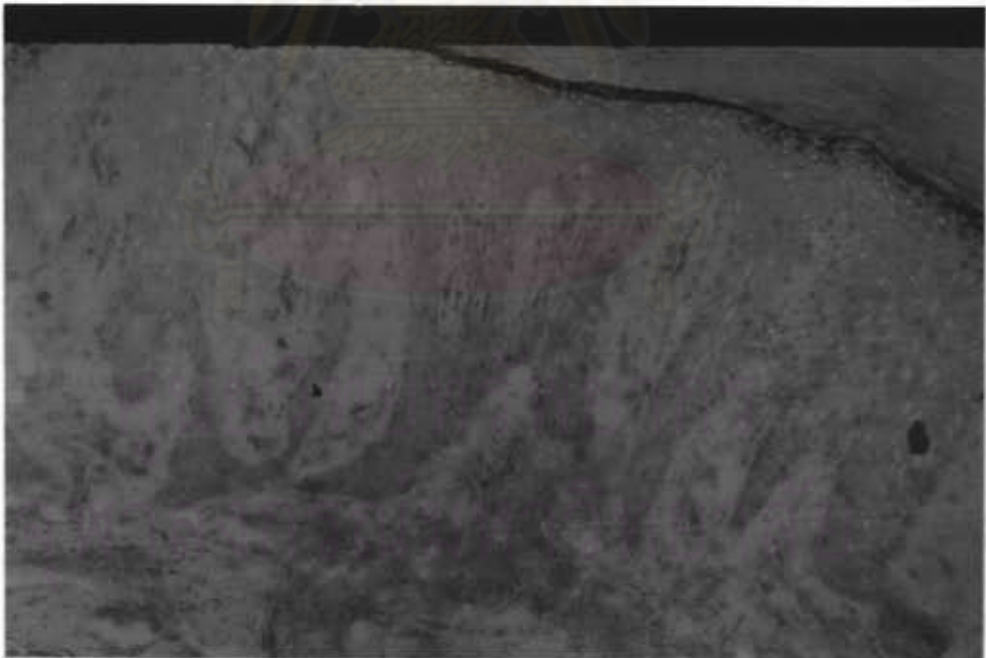


Fig 19 OKT-8-positive cells in patient No. 12 : day 42



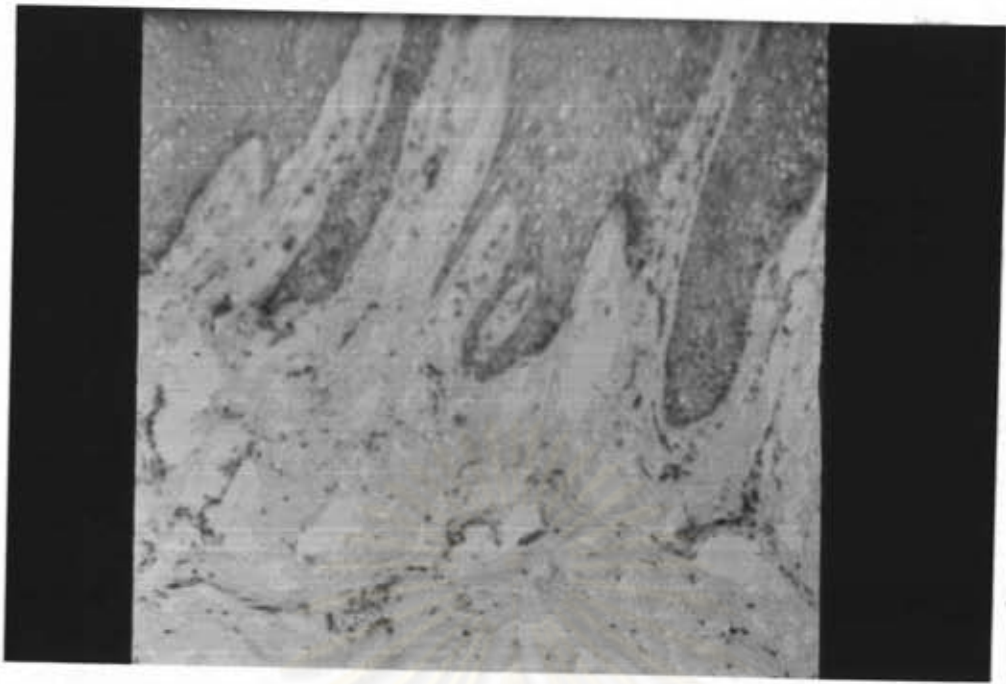


Fig 20 HLA-DR :patient No. 12 ;day 0

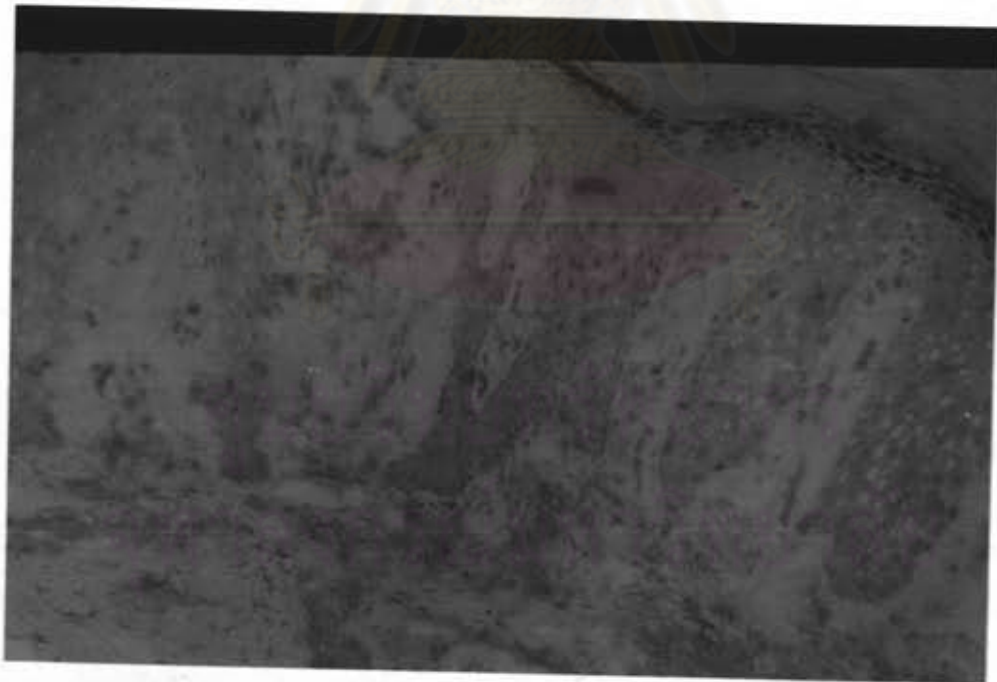


Fig 21 HLA-DR :patient No. 12 ;day 42

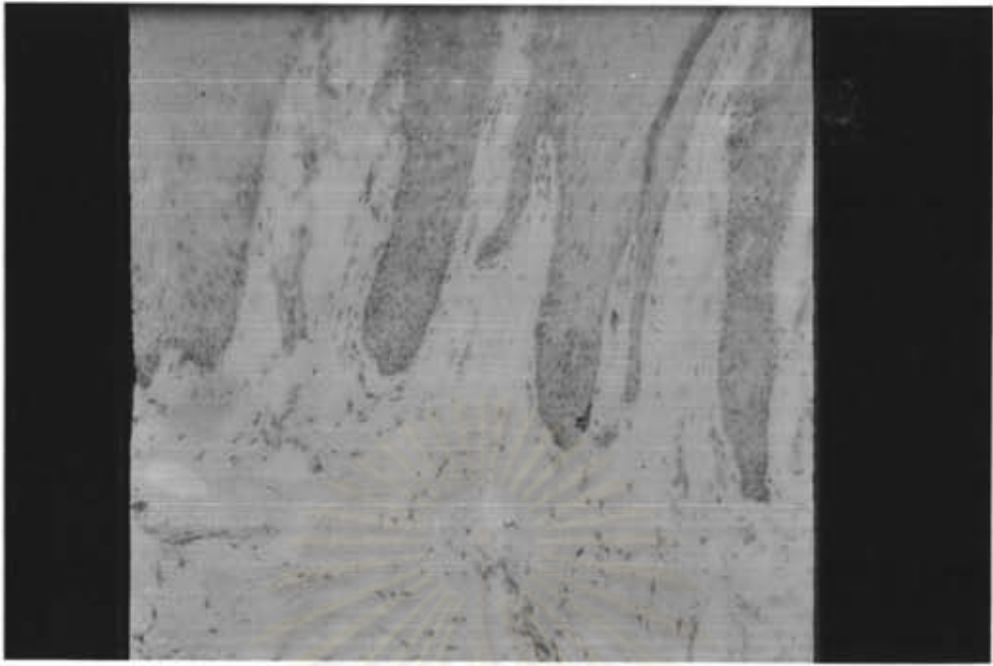


Fig 22 IL-2 receptor;patient No. 12 : day 0

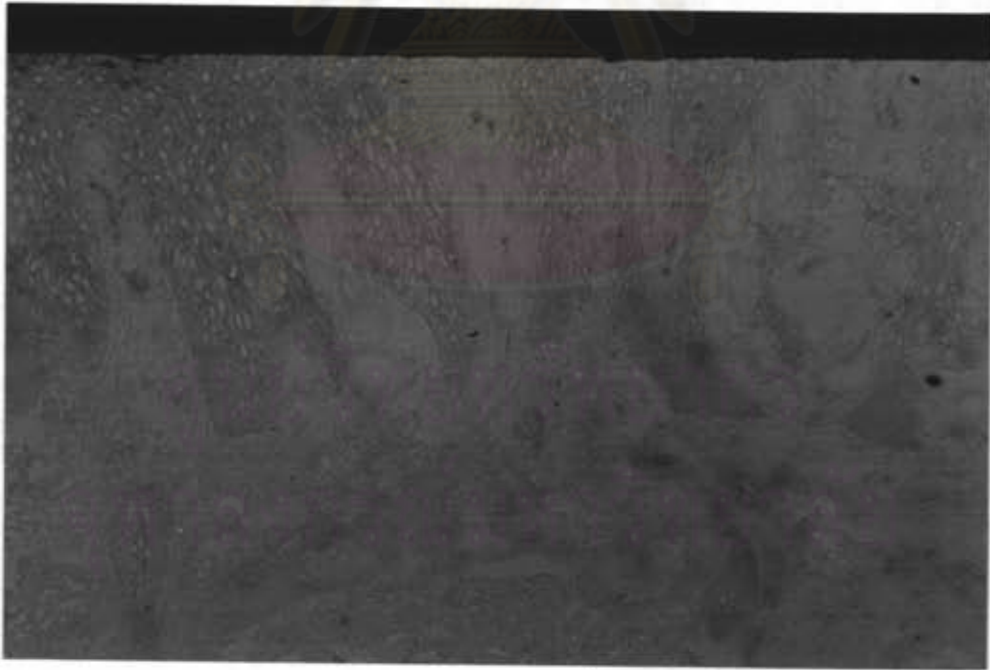


Fig 23 IL-2 receptor ;patient No. 12 ;day 42

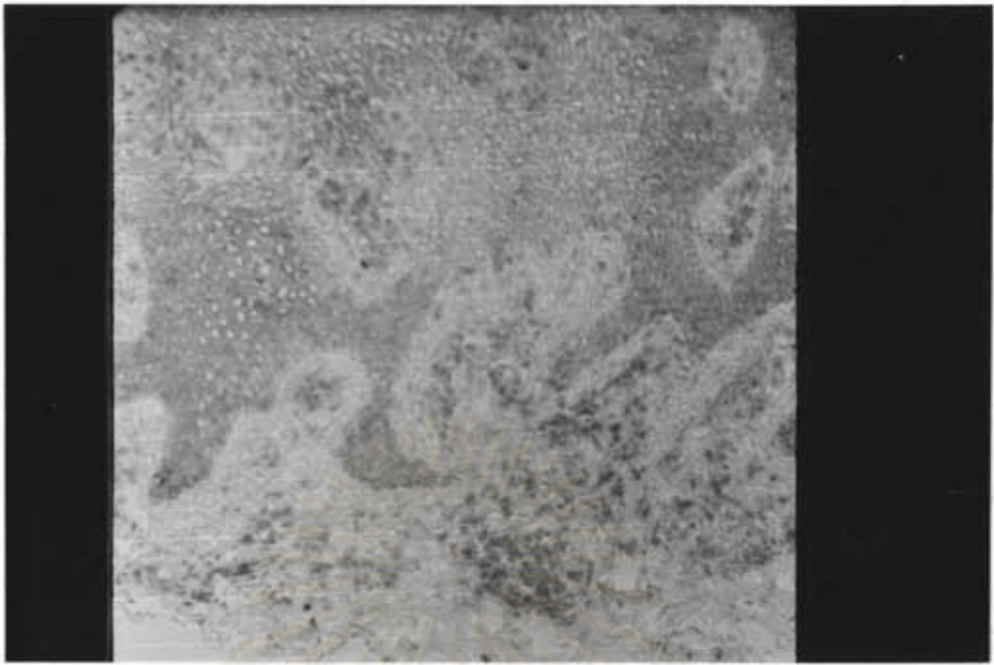


Fig 24 OKT-4 positive cell in patient No. 8 : day 0

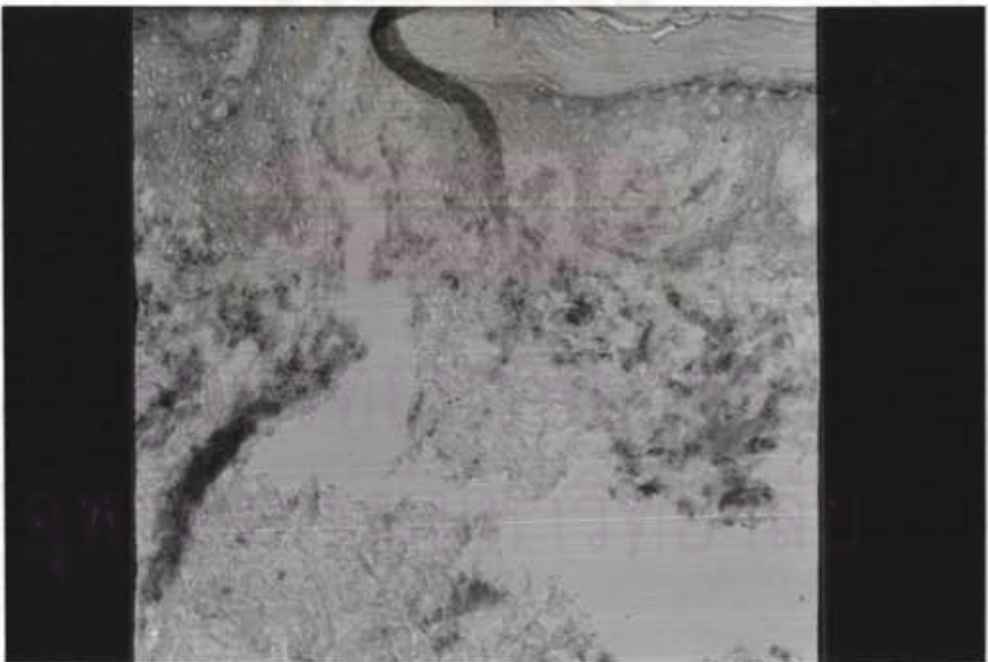


Fig 25 OKT-4 positive cell in patient No. 8 : day 14



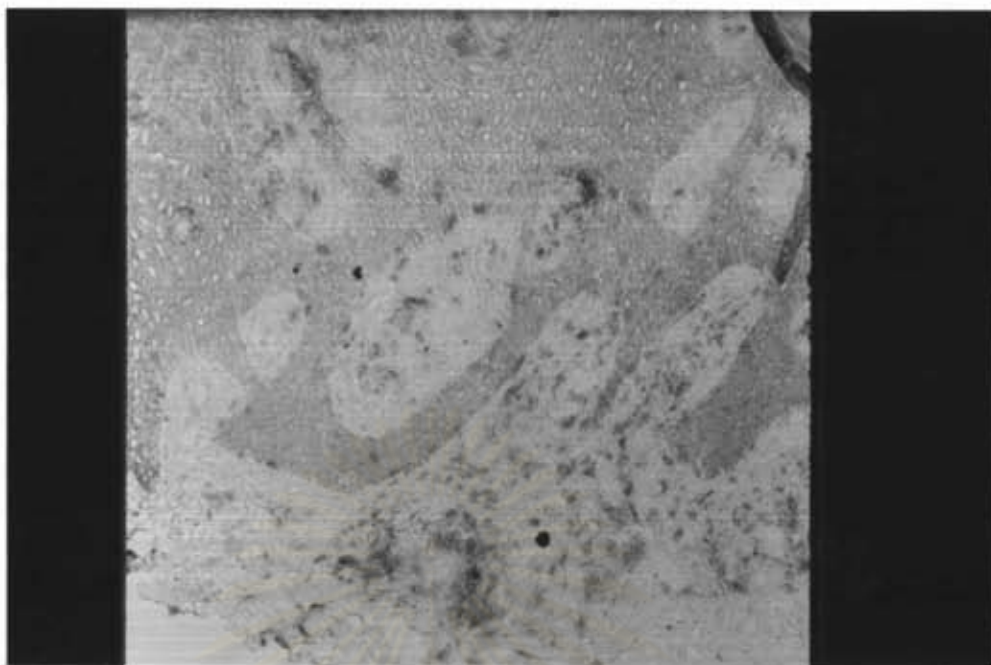


Fig 26 OKT-8 positive cell in patient No. 8 : day 0



Fig 27 OKT-8 positive cell in patient No. 8 : day 14



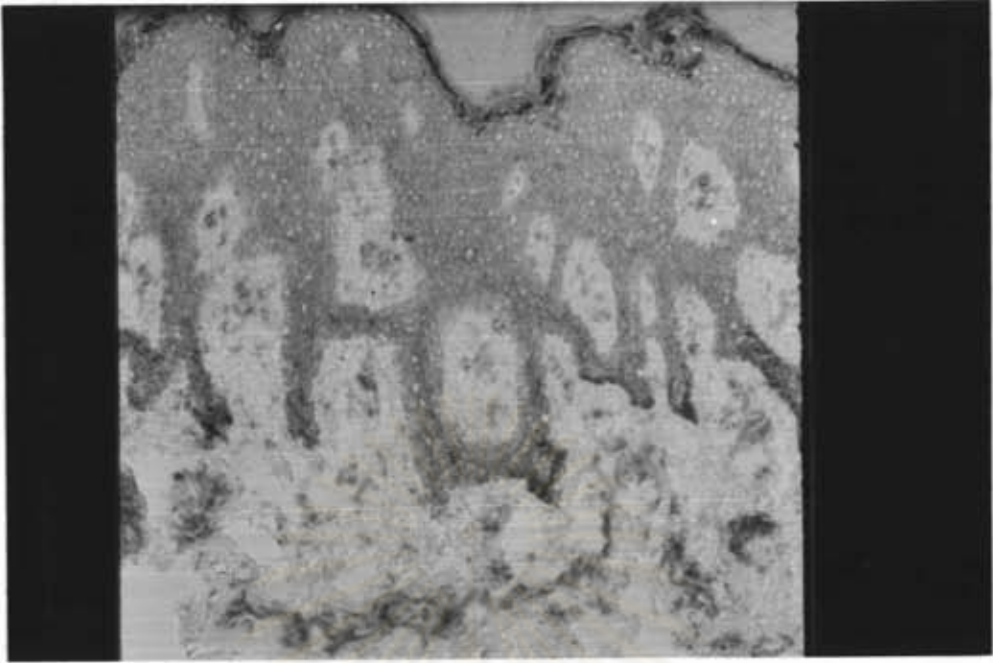


Fig 28 HLA-DR ;patient No. 8 ;day 0

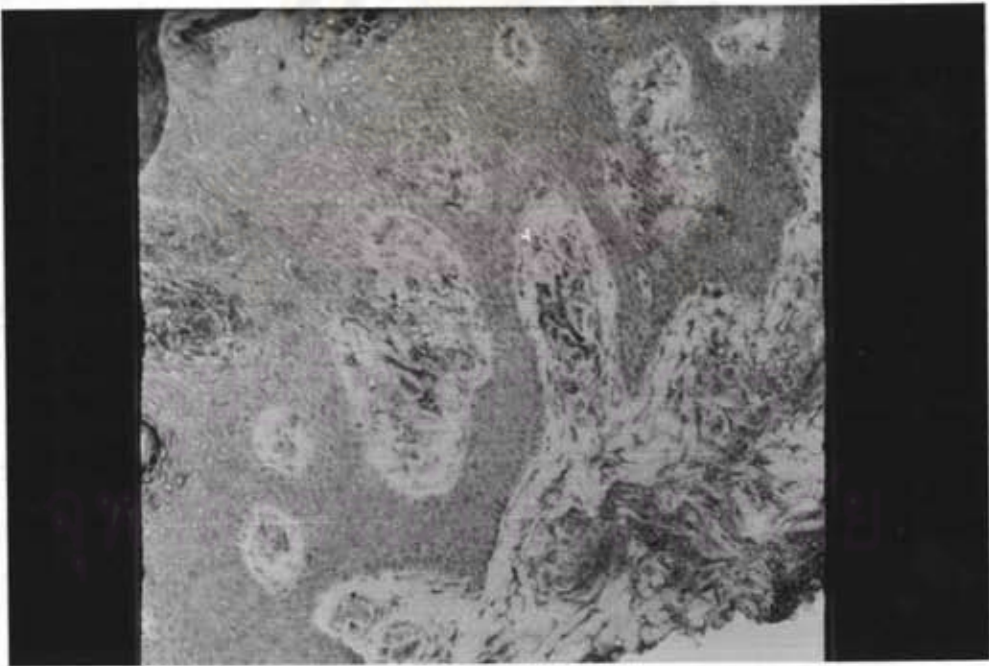


Fig 29 HLA-DR ; patient NO. 8 ;day 14

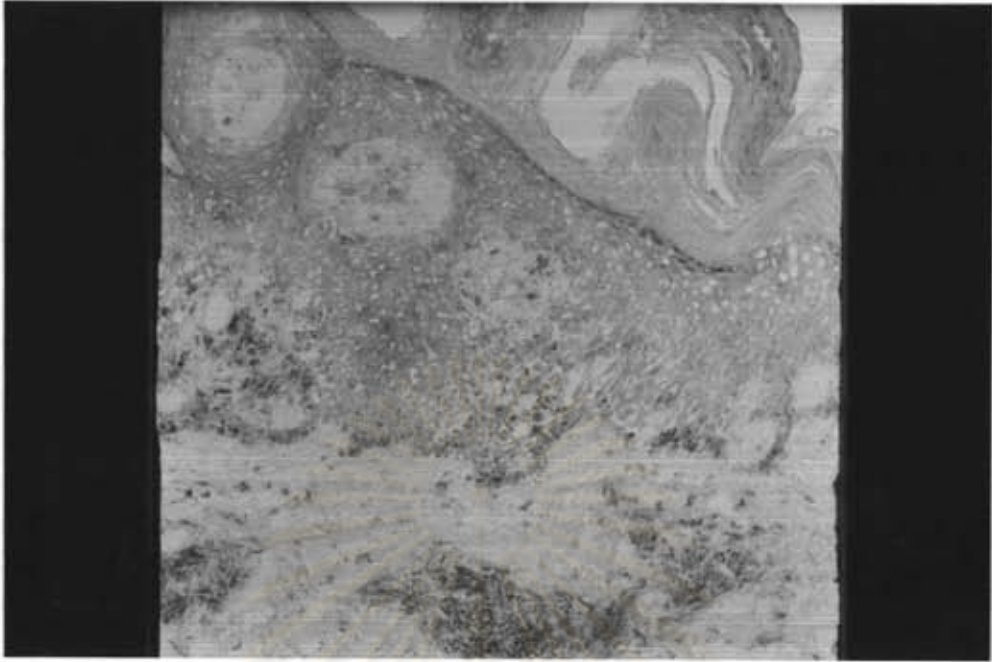


Fig 30 OMT-4 positive cell in patient No. 9 : day 0

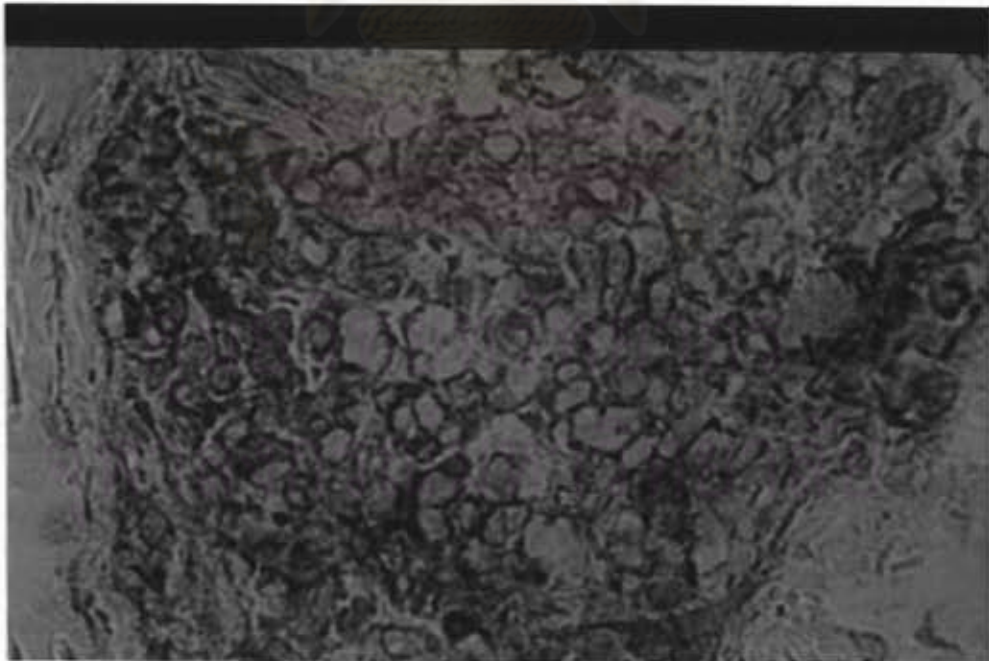


Fig 31 Higher magnification of cellular infiltrate in Fig 30

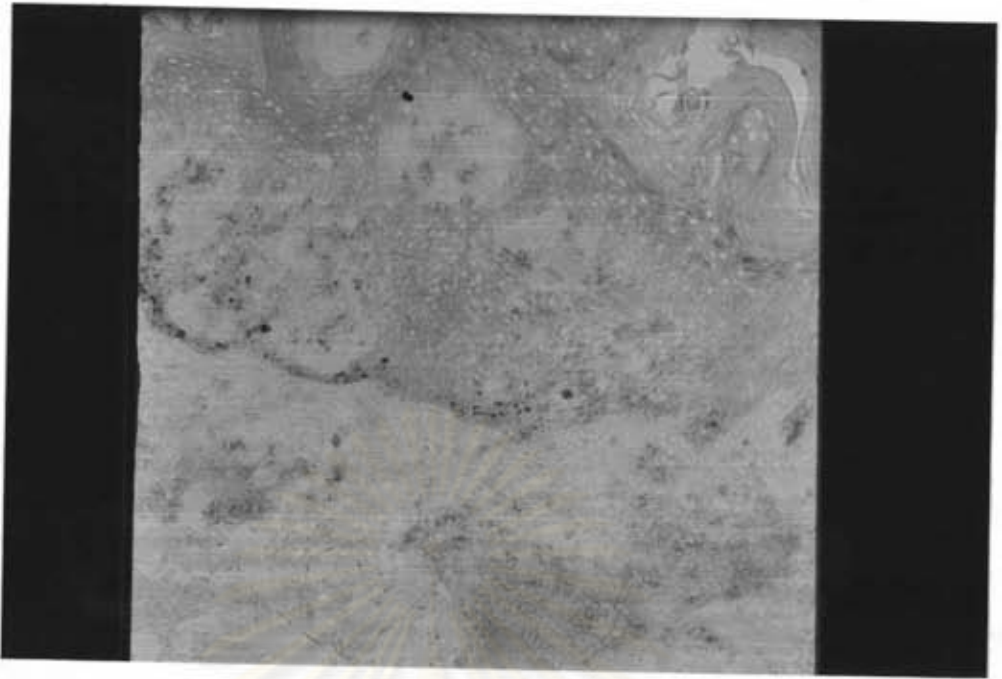


Fig 32 OKT-8 positive cell in patient No. 9 : day 0

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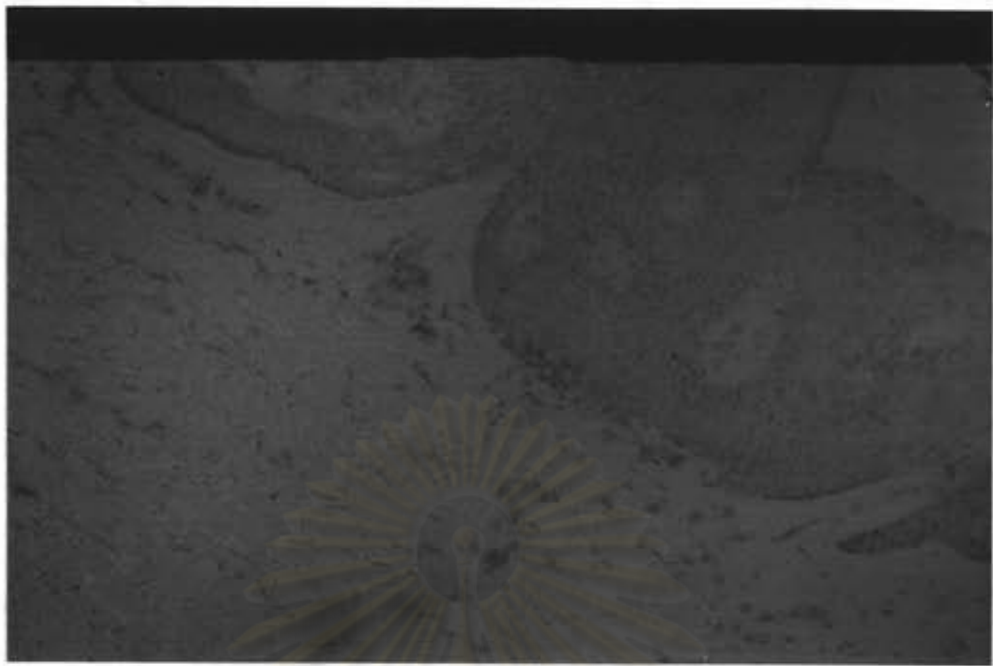


Fig 33 OKT-4 positive cell in patient No. 6 : day 0

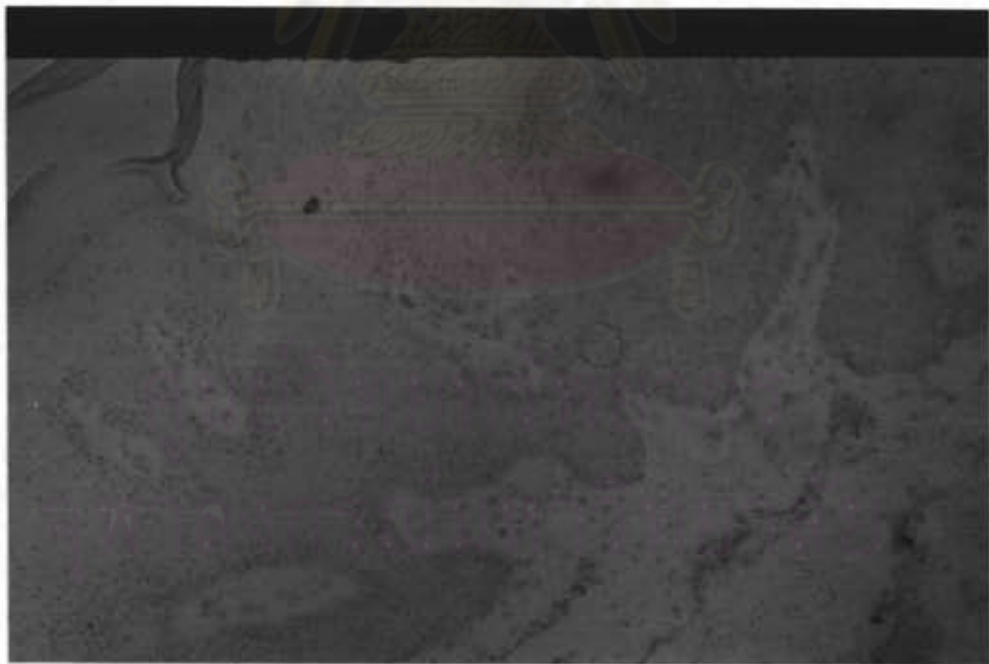


Fig 34 OKT-4 positive cell in patient No. 6 : day 56



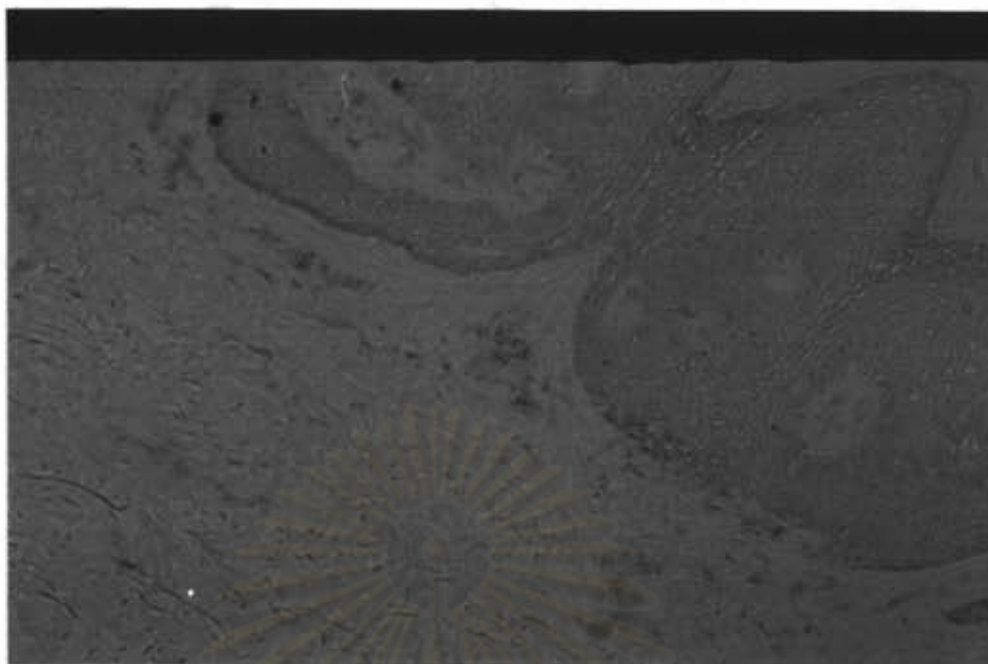


Fig 35 OKT-8 positive cell in patient No. 6 : day 0

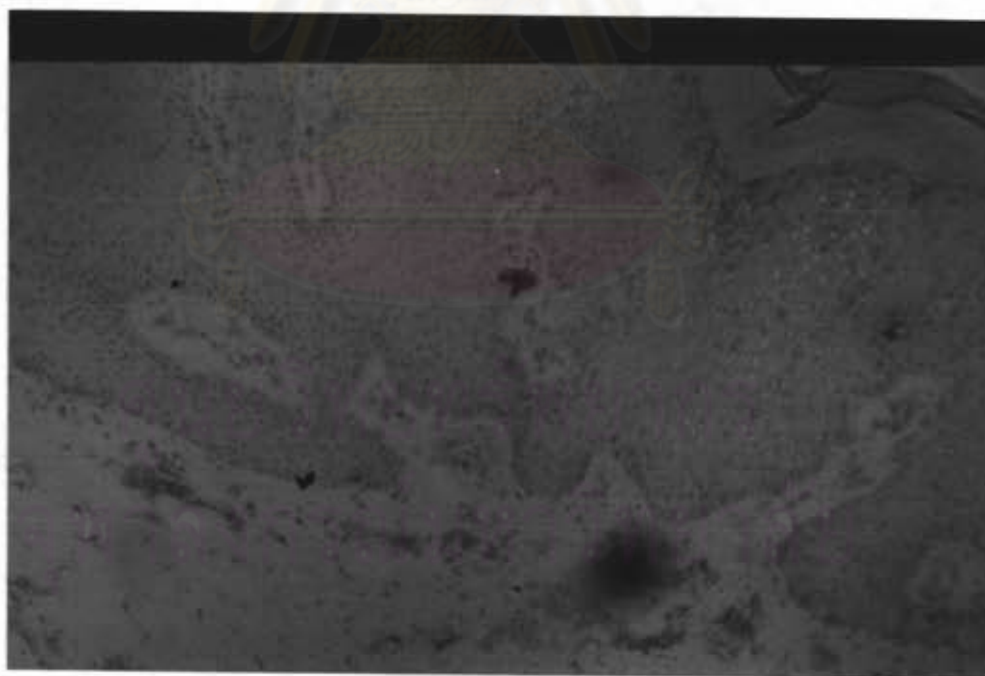


Fig 36 OKT-8 positive cell in patient No. 6 : day 56

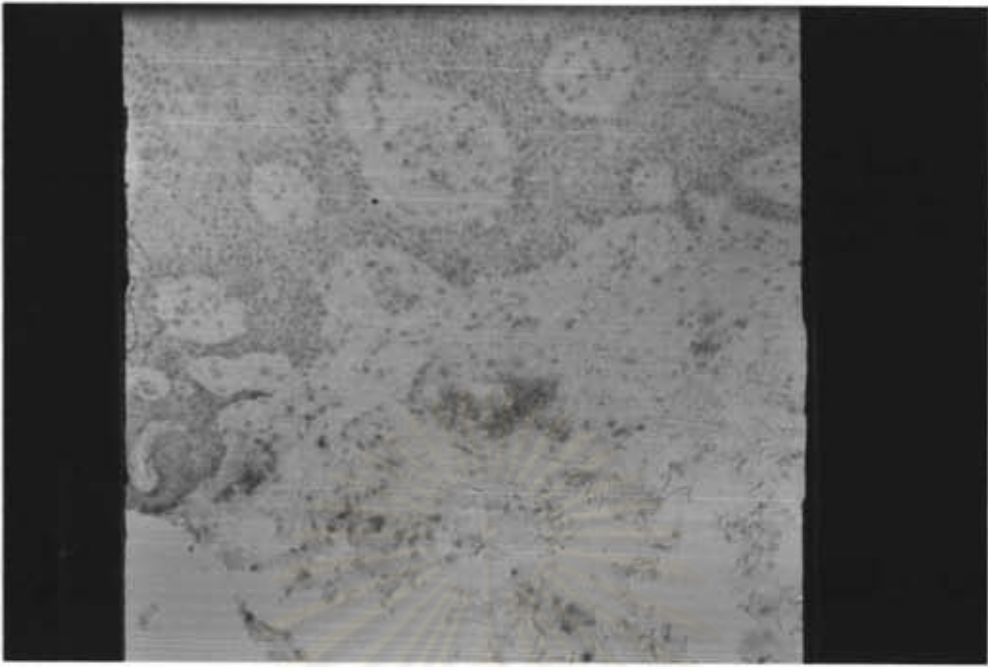


Fig 37 OKT-4 positive cell in patient No. 5 : day 0



Fig 38 OKT-4 positive cell in patient No. 5 : day 56

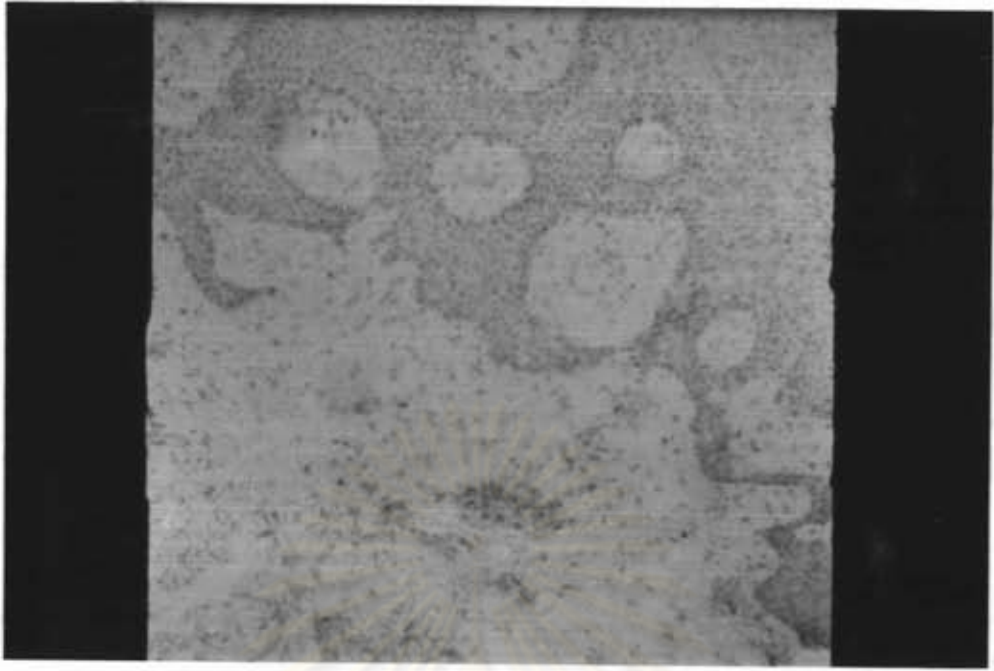


Fig 39 OKT-8 positive cell in patient No. 5 : day 0

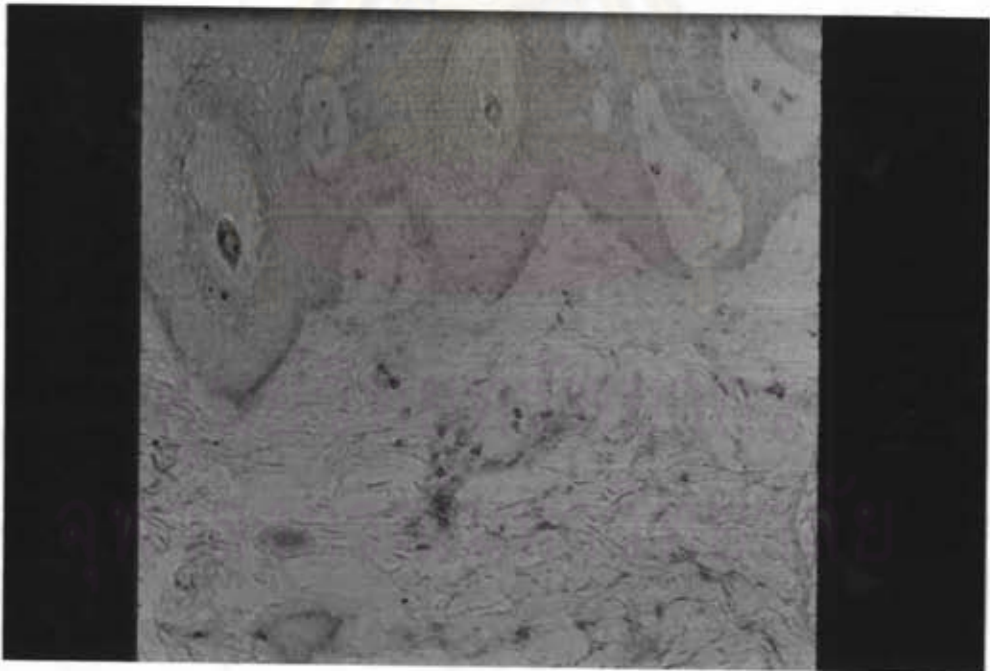


Fig 40 OKT-8 positive cell in patient No. 5 : day 56



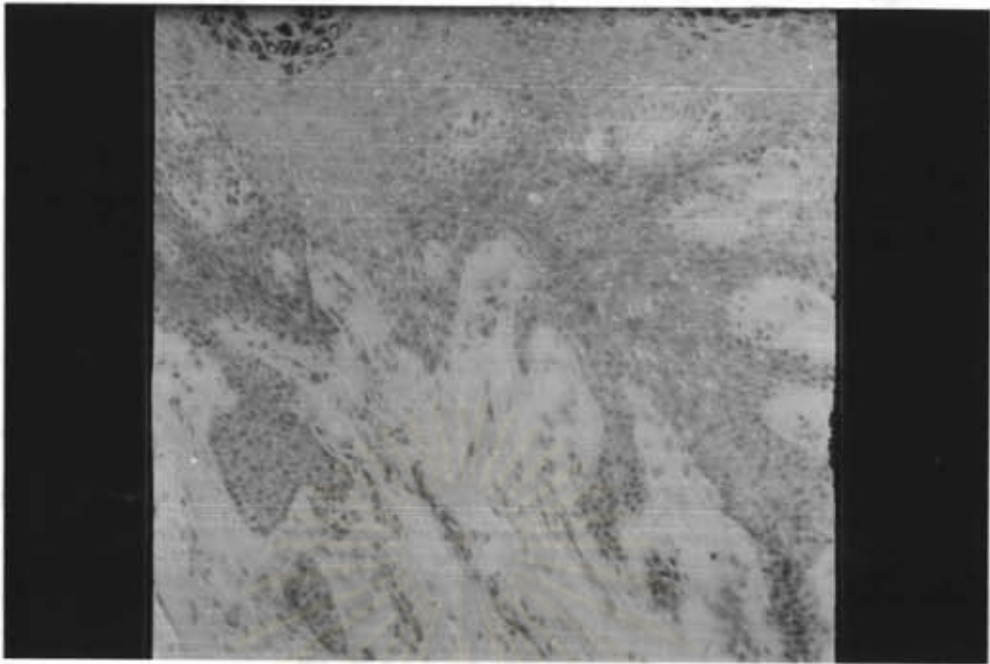


Fig 41 OKT-4 positive cell in patient No. 10 : day 0

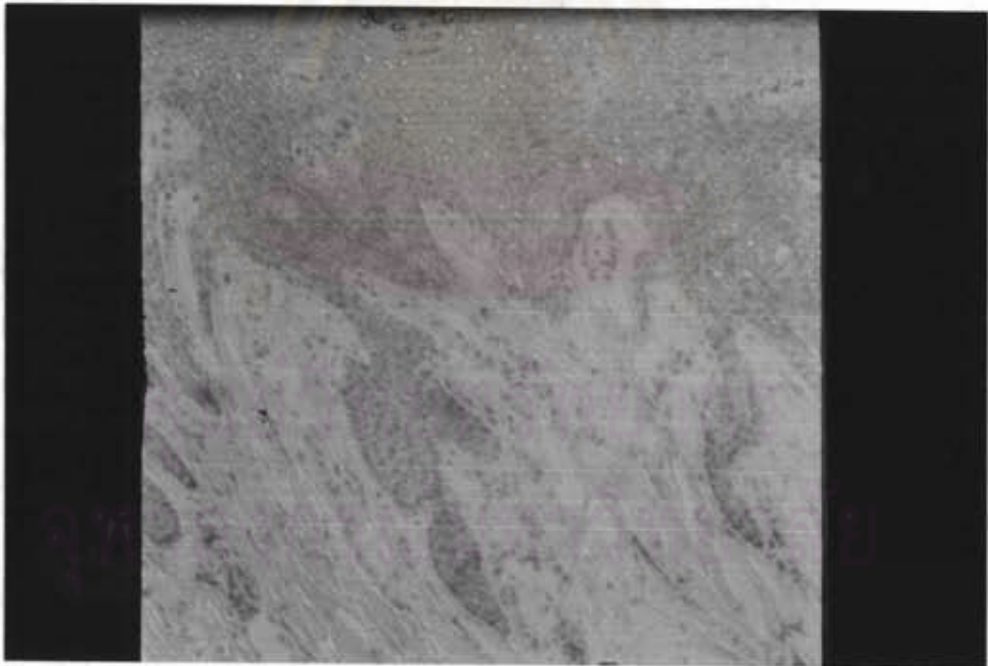


Fig 42 OKT-8 positive cell in patient No. 10 : day 0



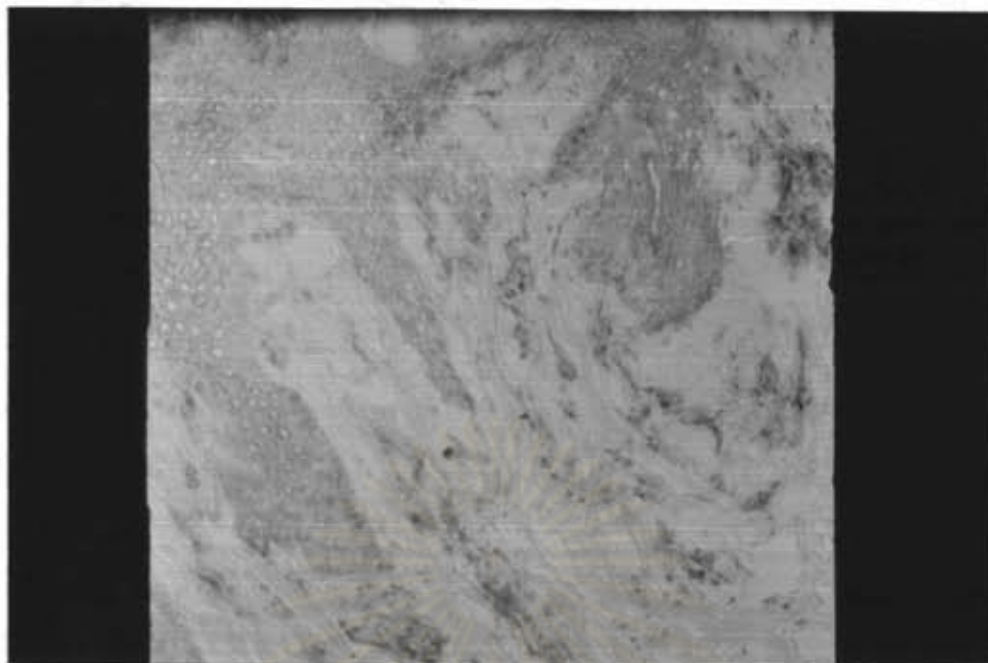


Fig 43 HLA-DR ;patient No. 10 ; day 0

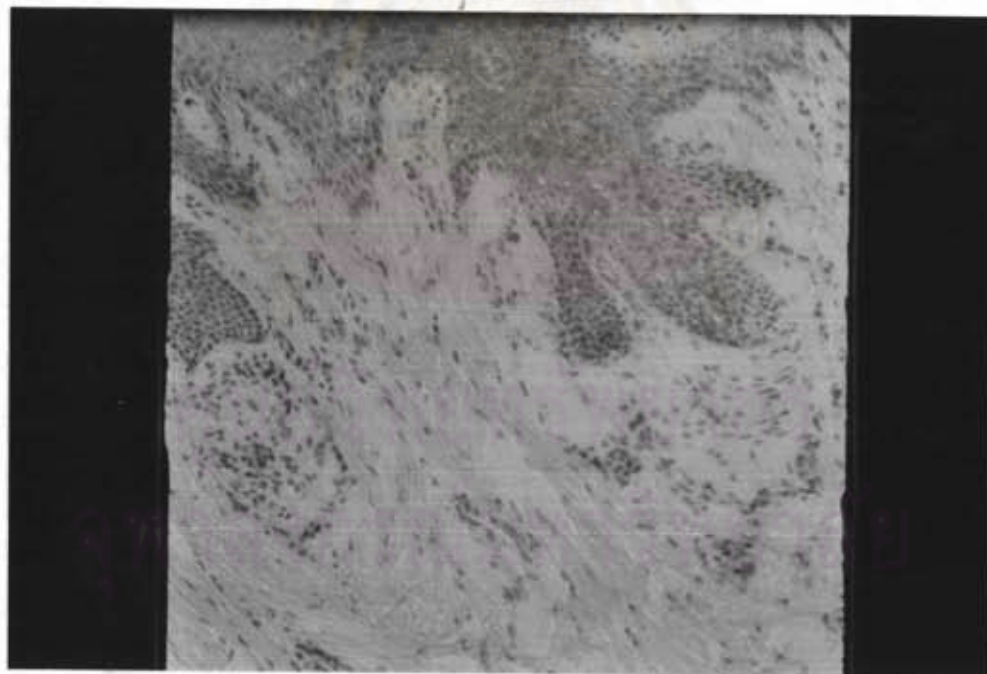


Fig 44 IL-2 receptor ;patient No. 10:day 0

Table V Results of Immunoperoxidase staining

Pt.#	Pretreatment				At Remission or End of Treatment				
	OKT-4	OKT-8	HLA-DR	IL-2-R	OKT-4	OKT-8	HLA-DR	IL-2-R	
5	+	+	-	-	+	+	-	-	*
6	+	+	-	-	+	+	-	-	*
8	+++	+++	++	++	++++	++++	+++	+++	**
9	+++	+++	++	++	Not Done				
10	-	-	-	-	Not Done				
12	++	++	++	+	++++	++++	++++	+++	**

+ Minimal

++ Mild

+++ Moderate

++++ Marked

\* End of Treatment

\*\* At Remission

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