

Table I. Result of tissue typing (DR antigens) in 28 patients with chronic dermatophytosis

Antigen	Patients		Controls	
	Pos. n	%	Pos. n	%
DR1	3/28	10	136/704	19.3
DR2	6/28	21	197/704	28.3
DR3	10/28	36	182/704	25.9
DR4	8/28	20	244/704	34.7
DR5	3/28	10	64/704	9.1
DR7	5/28	18	147/704	20.9
DR8	3/28	10	6/704	8.7
DR9	0/28	0	1/58	1.7
DR10	1/28	4	5/704	0.7

unrelated healthy individuals typed for HLA-ABC, and 58-704 unrelated individuals typed for HLA-DR. Statistical comparison were made with Fisher's exact test.

### RESULTS AND COMMENTS

In patients with CD the distribution of HLA-ABC antigens did not differ significantly from that of the controls. The antigen showing the 'most significant' deviation was HLA-Cw5, which was found in only one of 34 patients (3%), while 17.1% of the controls had this antigen. The difference is significant ( $p=0.016$ ), but this significance disappears when corrected for number of antigens investigated. The results of DR typing are given in Table I. No significant difference could be demonstrated between patients and controls.

In conclusion, this study did not reveal any association between chronic dermatophytosis and the HLA system. However, this negative finding clearly does not exclude the possibility that abnormal immune responses may be responsible for the susceptibility to CD, but it seems unlikely that HLA-controlled immune responses are involved.

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### Results of Lymphography in Early Mycosis fungoides

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**Abstract.** Lymphography was performed in 28 patients with mycosis fungoides. In 22 of the patients, the investigation took place prior to 2 months after the diagnosis was established, and in 7 of these lymphography was made before the histological verification of mycosis fungoides was possible. Five patients with widespread, persistent and severe atopic dermatitis served as controls. Eighteen patients with mycosis fungoides (64%) had abnormal lymphograms, while all 5 controls had normal lymphograms. Abnormal findings were diagnosed in 12 of 22 patients at the earliest time possible during the course of their disease and even found in 5 of 7 patients who only had premycotic lesions at the time of investigation. These results may have some bearing on therapy, suggesting that systemic treatment could possibly be introduced at a far earlier disease stage than is the custom at present.

**Key words:** Lymphography; Mycosis fungoides

Although a number of papers have appeared lately concerning lymphography (LG) in mycosis fungoides (MF) (2, 4, 5, 7, 10), the total number of patients studied hitherto is only small, and supplementary information may therefore be of value. Early data (4, 5, 10) suggested that LG might be helpful in staging MF, when modifying treatment planning, and when determining a prognosis, whereas the latest reports (2, 7) deny this and declare that there is little correlation between abnormalities in LG and the extent and the clinical course of MF.

This report presents our experience with LG in 28 patients affected by MF, almost all in the early stages of the disease. LG was performed when there was strong suspicion of MF, when the diagnosis was established, or on the earliest possible occasion following diagnosis. Only 2 of the 28 patients had their LG's performed more than 12 months after diagnosis. As a control, LG was also performed in 5 patients admitted to our ward suf-

Table I. *Time/diagnosis relationship of MF and lymphography*

Time of lymphography	Results	No. of patients
Performed before a diagnosis of MF was established	Abnormal	5
	Normal	2
Performed less than 2 months after diagnosis of MF	Abnormal	7
	Normal	8
Performed between 2 and 12 months after diagnosis of MF	Abnormal	4
	Normal	0
Performed more than 12 months after diagnosis of MF	Abnormal	2
	Normal	0

fering from widespread, persistent, and severe atopic dermatitis. Patients with severe atopic dermatitis resemble MF patients in that both groups often suffer from severe itching and secondary skin infection, and both may have elevated levels of IgE (13). Moreover, in both severe atopic dermatitis and in advanced MF a defective cellular immunity (12) is common.

## MATERIALS AND METHODS

During the last 10 years, 28 patients with a clinical and histological diagnosis of MF were examined by LG (Table I). In 7 patients LG was performed when MF was suspected, but prior to the established histological diagnosis. In 15 patients LG was done at the time of diagnosis or less than 2 months after. In 4 cases LG was undertaken more than 2 months, but less than one year after diagnosis, while 2 patients had their LG more than one year following diagnosis. The 5 control patients suffering from atopic dermatitis all underwent LG in connection with an exacerbation of their disease: this was the reason for their admission to hospital.

The staging of the disease is shown in Table II. The stages are those represented at the time of LG or at the time of the earliest histologically verified diagnosis of MF following LG. The staging was performed according to the Scandinavian MF-Group staging procedure (11). Stage II represents MF plaques, stage III tumours and stage IV clinical lymph node involvement. LG's were standard pedal lymphography performed with Lipiodol ultrafluid. All LG's were interpreted by the radiologist. The 3 patients who had palpable lymph nodes at the time of investigation were all subjected to lymph node biopsy after LG.

## RESULTS

The results are summarized in Table I and II. Normal LG's were seen in 10 MF patients (36%) and

in all 5 controls. Eighteen MF patients (64%) had abnormal LG's.

In general the abnormal findings consisted of moderate enlargements of femoral, common iliac, external iliac or para-aortic glands, with a coarse granulation. It was not possible to distinguish any special MF pattern. Serial abdominal films taken at various intervals during the year subsequent to LG showed one patient with normal LG shifting to abnormal. Otherwise no changes were observed at subsequent controls of the LG's.

Abnormal LG's were found in 5 of 7 patients in whom the diagnosis had not yet been established and in 7 of 15 patients investigated at the time of diagnosis, i.e. in 12 of 22 patients at the earliest possible opportunity during the course of their disease.

Abnormal findings were seen in all 6 patients investigated more than 2 months after the established diagnosis and in 5 of 7 patients admitted in the tumour stage of the disease. Surprisingly, a normal LG was found in 2 of 4 MF patients who had palpable pathological lymph nodes. The lymph node biopsy in these 4 patients revealed malignant lymphoma, mycosis fungoides.

It has not been possible to attribute any definite individual prognostic value to our investigations. However, 3 patients with abnormal LG's have progressed to stage IV, while none with a normal LG has progressed in stage.

## DISCUSSION

MF is a cutaneous T-cell lymphoma of T-cells most frequently having properties characteristic of helper T-cells (3, 8). The epidermotropic nature of the disease may result from the expansion of malignant clones originally derived from normal T-cells reacting against either epidermal antigens or maybe

Table II. *Relationship of mycosis fungoides staging and results of lymphography*

Staging of MF	Normal lymphography	Abnormal lymphography
Stage II	8	13
Stage III	0	3
Stage IV	2	2
Controls (atopic dermatitis)	5	0

rather extrinsic antigens that have become localized in the skin, e.g. a C-retrovirus (6, 14).

At first, the neoplastic T-cells in skin appear to belong to a slowly proliferating cell population. Later, however, rapid rates of cell renewal occur at extracutaneous sites. Autoradiographic studies seem to indicate that the peripheral lymph node is the major candidate for a primary site of cell renewal in more advanced stages of the disease (3). How early lymph nodes become involved is unknown. The LG findings cannot answer the question whether the early changes found in our studies—as well as in those of others (4, 7, 10)—represent precursor abnormalities, or the disease itself. It is worth noting, however, that in the present study, even before a sure histological diagnosis could be established, 5 of 7 patients showed abnormal LG's, and that altogether about 60% of early cases had a pathological lymphography.

Our findings may have some bearing on therapy. In general, the custom has been to treat the skin—and the skin only—until MF has progressed to an advanced stage. It is conceivable that systemic therapy should be used much earlier in order to achieve a more favourable cure rate. This is in spite of negative data from a retrospective study by Redmond & Rahbari (9) which, however, may be questioned (1), as no information was given regarding the presence or absence of lymphadenopathy and because Sézary's syndrome cannot be ruled out in their patients with erythroderma.

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## Contact Urticaria to Commercial Fish in Atopic Persons

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**Abstract.** The frequency of contact urticaria provoked by certain fish prepared in the Danish fish industry was examined in 14 persons with atopia. In 71.4% of the test persons we found positive confirmation in a 20-minute scratch patch test to one or more fish species. All occluded patch tests were negative, while 33.9% of the scratch patch tests were positive. It was impossible to make a correlation between positive scratch patch tests and atopic allergen/total IgE. The investigation emphasizes that atopics have a higher frequency of contact urticaria to fish than have non-atopics.

**Key words:** Fish, atopia; Contact urticaria; Occupational dermatitis; Skin testing