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## Galactose Tolerance Test and Methotrexate-induced Liver Fibrosis and Cirrhosis in Patients with Psoriasis

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**Abstract.** A total of 151 galactose tolerance tests (GTT) and liver biopsies were performed in a consecutive study of 45 psoriatic patients with methotrexate-induced liver fibrosis; of these, 23 had cirrhosis. Most patients with an abnormal liver histology had a normal GTT. We con-

Table 1. Correlation of galactose tolerance test and liver histology in 45 psoriatic patients receiving methotrexate therapy

GTT = galactose tolerance test

	In all	Liver histology		
		Normal	Fibrosis <sup>a</sup>	Cirrhosis
Normal GTT	133	43	90	33
Abnormal GTT	18	3	15	8

<sup>a</sup> Cirrhosis included.

clude that an oral GTT is not sensitive enough to reveal methotrexate-induced liver fibrosis or cirrhosis. The results indicate that the histological changes in methotrexate-induced liver fibrosis and cirrhosis may be of a rather non-aggressive nature.

**Key words:** Galactose tolerance test; Liver fibrosis/cirrhosis; Methotrexate; Psoriasis

Methotrexate (MTX) is valuable for psoriatic patients, where topical treatment cannot control the disease. MTX is, however, a hepatotoxic drug and also affects the bone marrow. Regular control of leukocytes, thrombocytes, liver function and liver histology is necessary. Liver biopsy is an unpleasant investigation, attended by potential risk of abdominal damage (e.g. bleeding), and the patient must be hospitalized for one day. In order to assess the usefulness of a non-invasive liver function test, we have compared the galactose tolerance test (GTT) with the liver histology in patients who developed fibrosis/cirrhosis during MTX therapy.

## PATIENTS AND METHODS

During 1972–81, liver biopsies revealed fibrosis in 45 psoriatic patients treated with MTX; 23 of these had cirrhosis. Cirrhosis usually occurred after a total of 2200 mg had been given (4). All patients were seen in our out-patient clinic for blood test and admitted at approximately one-year intervals for liver biopsy (*ad modum* Menghini) and performance of a GTT. This was done by giving 40 gram of galactose orally to the fasting patient, and then collecting the urine excreted during the ensuing 8-hour period. Normally, the galactose excretion is less than 3 g per litre of urine. The liver biopsies were studied by one of two pathologists (Dr G. Pallesen and Dr H. Søgård, Department of Pathology, Aarhus Kommunehospital).

## RESULTS

In all, 151 galactose tolerance tests and liver biopsies were performed in parallel. We found that 10 patients had liver fibrosis, and 6 had liver cirrhosis at their first comparative investigation. Twelve patients developed liver fibrosis and 17 developed liver cirrhosis during the observation period. The results are presented in Table 1.

Eighteen cases of pathological GTT values (Table 1) were found. No pathological GTT was found in premethtrexate psoriatics.

It is seen that there is a rather close correlation between an abnormal GTT and the finding of an abnormal liver histology. However, most patients with an abnormal liver histology—even cirrhosis—had a normal GTT.

## DISCUSSION

The GTT is a measure of the functional reserve of the liver (2). The peroral GTT was introduced in 1906 by Bauer (1) as a diagnostic remedy for liver cirrhosis. In 1952, G. Welin (3) compared the results of GTT and the liver histology in patients with acute hepatitis and liver cirrhosis, mostly of alcoholic origin. Among several liver tests, he found that the GTT was the most sensitive test, being positive in 78% of patients with cirrhosis. Tygstrup (2) recommended an intravenous administration of galactose to increase the sensitivity of the test to almost 100%.

Previously, it was observed that MTX-induced liver fibrosis and even cirrhosis in psoriatic patients was not reflected in abnormal liver function tests, except for transient increases in the SGPT test (SGPT: serum-glutamate-pyrovate-transaminases) (4). In the present consecutive study we found that the GTT is not sensitive enough to reveal abnormalities in the liver histology of MTX-treated psoriatic patients. The GTT is valuable, however, in patients with a pronounced degree of cirrhosis (2, 3). Our results indicate indirectly that MTX-induced liver fibrosis and cirrhosis may be of a rather non-aggressive nature.

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## Thalidomide Treatment of Recurrent Erythema multiforme

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**Abstract.** A case of severe, recurrent erythema multiforme in a 39-year-old man with excellent therapeutic response to thalidomide therapy is reported. The treatment caused the lesions to heal and has prevented recurrence for more than 6 months, up to the time of writing.

**Key words:** Erythema multiforme; Thalidomide; Treatment

The recurrent form of erythema multiforme, although only rarely life-threatening, may be a very annoying and even disabling disease for the affected patient. As in other forms of erythema multiforme, the cause is unknown, but various agents are considered to be able to trigger its onset (2).

Most cases of erythema multiforme require no therapy, although the more severe forms may benefit from corticosteroid treatment (4).

We report here on a patient who for 6 years suffered from erythema multiforme, with numerous attacks each year. Therapy with thalidomide caused prompt healing of the lesions; maintenance therapy has completely prevented relapses.

## CASE REPORT

A now 39-year-old patient experienced, for the first time in 1975, a blistering eruption in his mouth. On clinical and histological examination at our department, the diagnosis of erythema multiforme was made.

During subsequent years, the lesions recurred at short