

Liver fibrosis in psoriasis patients

UniQ PIIINP RIA

UniQ PIIINP RIA – a proven and reliable tool

Methotrexate is an antipsoriatic agent used in the management of severe psoriasis. A long-term use of methotrexate is associated with a risk of developing hepatic fibrosis. Liver fibrosis has until recently been monitored by liver biopsies which are expensive and associated with a risk of morbidity and mortality. Aidian's UniQ PIIINP RIA, a serum marker of N-terminal propeptide of type III procollagen provides a means of monitoring liver fibrosis with a patient-friendly and health-economical way.

Collagen in the liver

Type III collagen is a major support protein present in all soft tissues, including the liver. In liver fibrosis the concentrations of PIIINP, the aminoterminal propeptide of type III procollagen, are elevated^{2,3,4,5,6}.

Simple blood test

The concentration of PIIINP in blood can easily be measured with the UniQ PIIINP RIA assay. Being a serum assay UniQ PIIINP RIA has low biological and analytical variation. Serum sample needs no prepreparation and the antigen in the sample is very stable.

Methotrexate treated psoriasis patients

Patients receiving long-term treatment with methotrexate for psoriasis are at risk on developing hepatic fibrosis.³

Liver biopsies

Until recently, repeated liver biopsy was regarded as the only reliable method of detecting liver fibrosis in these patients. Liver biopsies are expensive and even associated with risks of morbidity and mortality. It has been shown that the need for biopsies in psoriasis patients on long-term methotrexate therapy can be reduced by measuring PIIINP, a serological marker of fibrosis.^{3,4,5,6}

Reliable monitoring with PIIINP instead of liver biopsy

The reliability of PIIINP monitoring has been shown in a study among methotrexate treated psoriasis patients who were managed by using serial PIIINP measurements and

selective liver biopsy and compared with control groups monitored according to standard guidelines. These patients were subjected to sevenfold fewer liver biopsies than the controls without evidence that important liver toxicity was missed in the process^{3,4}.

A patient-friendly non-invasive method also bringing cost savings

Cost analysis suggests that introduction of these guidelines would produce substantial cost savings. Moreover, patients would avoid the inconvenience of repeated liver biopsies and the risks biopsy is associated with.³ The use of PIIINP in monitoring methotrexate treated psoriasis patients is described in the European S3-guidelines on the systemic treatment of psoriasis vulgaris¹.

References

1. Pathirana D et al. European S3-guidelines on the systemic treatment of psoriasis vulgaris. *J Eur Acad Dermatol Venereol.* 2009;23:1-70.
2. Risteli J et al., Rapid equilibrium radioimmunoassay for the amino-terminal propeptide of human type III procollagen. *Clin Chem* 1988;34/1:715-718
3. Chalmers RJG et al., Replacement of routine liver biopsy by procollagen III aminopeptide for monitoring patients with psoriasis receiving long-term methotrexate: a multicentre audit and health economic analysis. *Br J Dermatol* 2005;152:444-450
4. Maurice PD et al., Monitoring patients on methotrexate: hepatic fibrosis not seen in patients with normal serum assays of aminoterminal peptide of type III procollagen. *Br J Dermatol.* 2005;152:451-8
5. Zachariae H et al., The value of amino-terminal propeptide of type III procollagen in routine screening for methotrexate-induced liver fibrosis: a ten-year follow-up. *Br J Dermatol.* 2001;144:100-3
6. Khan et al., Use of amino terminal type III procollagen peptide (P3NP) assay in methotrexate therapy for psoriasis. *Postgrad. Med. J.* 2006; 82: 353-354