



PSORIASIS

## MAGNETIC RESONANCE ELASTOGRAPHY AND HEPATOGRAM AS A NON-INVASIVE TOOL FOR DETECTING AND QUANTIFYING HEPATOTOXICITY IN PSORIASIS PATIENTS RECEIVING METHOTREXATE.

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**Introduction:** Methotrexate has proved to be one of the most effective systemic agents in the treatment of psoriasis over the years but there are apprehensions about its use due to the fear of its most dreaded complication - "hepatotoxicity". Even though liver biopsy is regarded as the gold standard, its use is limited as it is an invasive procedure with a risk of associated mortality and morbidity. Magnetic resonance elastography(MRE) is a non invasive imaging technique approved by the US Food and Drug Administration (FDA) for assessment of liver fibrosis.

**Objective:** To assess hepatic injury in psoriasis patients who are on methotrexate therapy using MRE and hepatogram.

**Materials and Methods:** 62 adult psoriasis patients, 43 men and 19 women, who are on methotrexate for variable durations ranging from 1-12 years were enrolled over a period of 2 years. MRE and hepatograms were performed to measure the mean liver stiffness and fat fraction.

**Results:** Out of the 62 patients, 19 had normal mean hepatic parenchymal stiffness (kPa), 25 had some inflammation and 9 had stage 1-2 fibrosis. Stage 2-3 fibrosis and stage 3-4 fibrosis was noted in 3 patients each and 3 patients had changes of stage 4 fibrosis/cirrhosis on MRE. The mean proton density fat fraction was grade 0 in 23 patients, grade 1 in 27 patients, grade 2 in 7 patients and grade 3 in 3 patients. Higher kPa and fat fraction was seen in patients having metabolic syndrome and neither MTX cumulative dose nor treatment duration correlated with mean liver stiffness values or fat fraction.

**Conclusions:** Magnetic resonance elastography (MRE) is a safe, non invasive and promising alternative to assess hepatic fibrosis and can be used to classify psoriasis patients on long term MTX therapy, especially those having metabolic syndrome in whom





liver damage should be suspected.

