

Deciding to change dosage form for methotrexate (MTX)

Patient: 51-year-old female

Diagnosis: Diagnosed with rheumatoid arthritis (RA) 18 months ago

Current treatments for RA: Oral MTX, 20 mg/week; adalimumab, 40 mg every other week



Not an actual patient

Clinical Scenario

Inadequate response leads the rheumatologist to explore exposure to active metabolites at current dose and dosage form.

- Patient is experiencing pain and mild swelling in the feet, as well as stiffness in the shoulders and jaw
- Initiated oral MTX 14 months ago; concomitant adalimumab started 6 months ago
- Treatment objectives were met within 2 months of initiating combination therapy; however, disease activity is now increasing

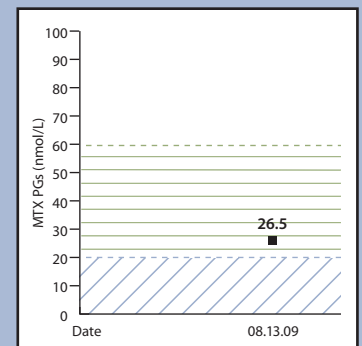
Clinical Questions and Next Steps

Rheumatologist orders Avise PGSM to determine exposure to the active metabolites of MTX and to aid with clinical decisions such as:

- What contribution is MTX making in combination therapy?
- Is the patient metabolizing oral MTX efficiently or is parenteral delivery justified?
- To what degree is the patient adherent to current MTX therapy?

Avise PG Results

Results for the Avise PG test are 26.5 nmol/L, indicating that circulating levels of MTX polyglutamates (PGs) are in the low intermediate range.



Treatment Plan

Rheumatologist switches the patient from 20 mg oral MTX therapy to parenteral injection at the same dose to improve bioavailability and exposure to the active metabolites of MTX. Adalimumab treatment continues unchanged.

Patient Outcomes

- Patient shows dramatic improvement in swelling and stiffness
- Avise PG test is ordered 3 months later, and MTX PG levels are 42.5 nmol/L
- Rheumatologist decides to continue to assess response and increase the MTX dose only if symptoms recur
- With the new treatment regimen of MTX by injection combined with adalimumab, this patient is back in remission