Profound Urate-Lowering May Reduce Joint Damage in Tophaceous Gout

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The authors analyzed serial hand and feet radiographs of 8 patients treated with intravenous pegloticase (Krystexxa). Pegloticase is a PEGylated uric acid-specific enzyme that reduces serum urate, resolves subcutaneous tophi, and shrinks the intraosseous tophi believed to play a direct role in bone erosion.

It has not been well-studied for its effects on healing radiographic damage.

In the current study, serial plain hand and foot radiographs obtained at baseline and at 12 months showed reductions in bone erosion and radiographic scores using the gout-modified Sharp-van der Heijde method, but no lessening of joint space narrowing.

The median total radiographic score went down from 69.25 at baseline to 57.25 at 12 months, and the median erosion score declined from 44.0 at baseline to 37.0 at one year.

In 24-month follow-up images from 5 patients, qualitative site-by-site analysis revealed regression of soft tissue masses, increased sclerosis with bone erosion filling but, again, no change in joint space narrowing, suggesting that cartilage has a limited capacity for repair.

All patients had a profound urate-lowering response (<1mg/dL) from a mean level of 9.9 mg/dL before treatment. However, such profound reductions are not achievable with oral urate-lowering therapies in clinical practice, the researchers say.

These data suggest that urate lowering may prevent structural joint damage in severe gout, but the authors call for larger studies with more advanced imaging (e.g., CT) to determine how quickly erosions heal, the links to tophus regression, and the required serum urate target.

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