Medical Xpress

Clinical trial demonstrates that rilonacept significantly reduces gout flares

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A phase II clinical trial found that rilonacept, an inhibitor of the protein interleukin-1 (IL-1), significantly reduced acute gout flares that occur when initiating uric acid-lowering therapy. Results of the trial—the first placebo-controlled study investigating IL-1 targeted therapy in prevention of gout flares—show rilonacept to be generally well tolerated with no serious infections or treatment-related serious adverse events reported. Full findings are published in *Arthritis & Rheumatism*, a journal of the American College of Rheumatology (ACR).

Patients with gout—a type of inflammatory arthritis caused by the crystallization of urates in soft tissues—experience severe pain and swelling, often affecting the feet. A recent study also published in Arthritis & Rheumatism reported that doctor-diagnosed gout has risen over the past twenty years and now affects 8.3 million individuals in the U.S. Previous research shows that while gout attacks typically resolve spontaneously over several days, urate crystals remain in the joint, which can lead to recurrent attacks and if left untreated may permanently damage joints.

"To reduce deposits of crystals in the joints, we advise patients to initiate treatment with medications that lower levels of uric acid in the blood," said lead investigator Dr. H. Ralph Schumacher, Jr., Professor of Medicine at the University of Pennsylvania School of Medicine. The authors explain that in the early months of urate-lowering therapy, as crystal deposits are broken up, patients may experience gout attacks that are proposed to be due to the release of crystals from softened deposits.

These urate crystals interact with cells that release interleukin-1 (IL-1) which can lead to a cascade of inflammation and acute joint pain flares.

Previous research has found that acute gout attacks brought on by uric acid-lowering therapy may make patients less likely to continue treatment. "Well tolerated drugs that reduce the risk of gout flares when initiating uric-acid lowering therapy could make patients more likely to continue important long-term treatments that control gout," added Dr. Schumacher.

Rilonacept—marketed under the brand name ARCALYST® to treat another disease—is designed to neutralize the protein IL-1 before it produces signals that can trigger inflammation. Thus, researchers looked to test the effectiveness of rilonacept in preventing gout flares and enrolled 83 patients at 27 study centers across the U.S. for a phase II clinical trial. Participants were 18 years of age or older and had gout, including a history of two or more gout flares within the prior year, as well as elevated blood levels of uric acid. Participants were randomized in a double blind fashion, with 41 administered rilonacept via subcutaneous injection (a double dose [320 mg], followed by (160 mg weekly for 16 weeks) and 42 administered weekly placebo. All patients were started on allopurinol (300mg/day) to reduce uric acid levels.

Trial results revealed a significantly lower number of gout flares in participants taking rilonacept with only 6 flares in the rilonacept arm compared with 33 in the placebo group. Researchers also observed fewer flares in patients treated with rilonacept as early as four weeks following the start of therapy. At the 12-week study point, only 15% of patients taking rilonacept had experienced gout flares compared to 45% of those in the placebo group. No deaths or serious infections occurred in either group. Common adverse events included infections reported in 15% of the rilonacept group compared with 26% with the placebo.

"This trial provides well-controlled evidence that this IL-1 blocker is effective in preventing acute gout flares in this setting," confirmed Dr. Schumacher. "Rilonacept appears safe and well tolerated and could increase patient adherence to long-term urate-lowering therapy." The authors recommend further evaluation of rilonacept in patients with gout .

More information: "Rilonacept (IL-1 Trap) in the Prevention of Acute Gout Flares During Initiation of Urate-Lowering Therapy: Results of a Phase 2 Clinical Trial." H. R. Schumacher, Jr., John S. Sundy, Robert Terkeltaub, Howard R. Knapp, Scott J. Mellis, Neil Stahl, George D. Yancopoulos, Yuhwen Soo, Shirletta King-Davis, Steven P. Weinstein, Allen R. Radin on behalf of the 0619 Study Group. Arthritis & Rheumatism; Published Online: January 5, 2012 (DOI: 10.1002/art.33412).

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