Nature Reviews Rheumatology | Published online 22 Jan 2016; doi:10.1038/nrrheum.2016.7

SPONDYLOARTHROPATHIES

IL-17A blockade ameliorates ankylosing spondylitis

> Patients who received 150 mg secukinumab (...) had higher ASAS20 response rates than those who received placebo

A 2012 phase 2 study of secukinumab, a fully-human anti-IL-17A monoclonal antibody, showed that IL-17A inhibition could alleviate symptoms in patients with ankylosing spondylitis (AS). These findings are now confirmed in two phase 3, double-blind trials of secukinumab in patients with AS reported in *The New England Journal of Medicine*.

MEASURE 1, which included 371 patients with active AS, assessed the efficacy of three secukinumab intravenous injections (10 mg per kg body weight) on weeks 0, 2 and 4, followed by subcutaneous injections of secukinumab (150 mg or 75 mg) or placebo every 4 weeks. In MEASURE 2, a total of 219 patients received subcutaneous secukinumab from baseline (150 mg or 75 mg) every week for 4 weeks and every 4 weeks thereafter, or placebo. Both trials included anti-TNF-naive individuals as well as anti-TNF incomplete responders, and had as the primary endpoint the proportion of patients with ≥20% improvement in Assessment of Spondyloarthritis International Society (ASAS20) criteria at 16 weeks after treatment start.

Patients who received 150 mg secukinumab per treatment, regardless of the route of administration, had higher ASAS20 response rates than those who received placebo (61% vs 29%, $P<0.001$ in MEASURE 1; 61% vs 28%, $P<0.001$ in MEASURE 2). ASAS20 responses in the 75 mg groups were significantly higher than placebo in MEASURE 1 (60% vs 29%, $P<0.001$), but not in MEASURE 2 (41% vs 28%, $P=0.1$). Improvements observed at 16 weeks in patients treated with secukinumab from baseline were maintained through week 52, and were also observed in patients with previous incomplete response to anti-TNF treatments. The rates of serious adverse events in patients treated with 150 mg secukinumab were 8.0 and 6.6 events per 100 patient-years in MEASURE 1 and MEASURE 2, respectively; in MEASURE 1, the incidence of infections was higher in patients treated with secukinumab than in those who received placebo (30% vs 12%).

These results confirm the importance of the IL-23–IL-17 axis for the pathogenetic mechanisms of AS, and support secukinumab as an additional therapeutic option for patients with this disease. "This is the first alternative to anti-TNF biologic agents to show efficacy in this indication," explains Dominique Baeten, corresponding author of the report. "Further studies are ongoing to determine the long-term efficacy and safety of this drug in active AS, its effect on progression of structural damage, and the best position for secukinumab in our treatment algorithms."

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ORIGINAL ARTICLE Baeten, D. *et al.* Secukinumab, an interleukin-17A inhibitor, in ankylosing spondylitis. *N. Engl. J. Med.* **373**, 2534–2548 (2015)
FURTHER READING Lubberts, E. The IL-23–IL-17 axis in inflammatory arthritis. *Nat. Rev. Rheumatol.* **11**, 415–429 (2015)