

A Recent Update of Ixekizumab in Moderate to Severe Plaque Psoriasis

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ABSTRACT:

Psoriasis is a chronic skin disease affecting millions of people globally. The most common type of psoriasis is plaque psoriasis. Currently FDA-approved Ixekizumab for the treatment of moderate to severe plaque psoriasis in adults. Ixekizumab is monoclonal antibody with high affinity. It selectively targets IL-17A and is indicated for the treatment. It is phase III of clinical trials and three phases of phase III clinical trials were conducted for safety and efficacy, namely UNCOVER I, UNCOVER II and UNCOVER III. Previously conducted various study was reviewed and analyzed in this study. Ixekizumab has proved to be safe and efficacious in the treatment of moderate to severe plaque psoriasis.

INTRODUCTION:

Globally approximately more than 125 million people are affected by psoriasis. It is a disease described by chronic inflammation of the skin [1]. The most common type of psoriasis is “plaque psoriasis”, also known as “Psoriasis Vulgaris” [2]. The plaque psoriasis presented clinically with the following features: - dry plaques which are red in color, raised, can easily be demarcated, and covered with silver-colored scales, and also associated with itchy, painful skin that cracks or bleed [1,2]. Comorbid conditions such as “psoriatic arthritis, inflammatory bowel diseases, cardio-metabolic disorders, depression, and anxiety” are may associate with psoriasis [1–3]. Hence, untreated psoriasis may lead to a physical, social, occupational, psychological, and socioeconomic burden, and may significantly impair “health-related quality of life (HR-QOL)” [1, 2]. In order to treat moderate-to-severe plaque psoriasis, novel pharmacological treatments with improved long-term efficacy and safety are required.

Currently, the interleukin (IL)-17 cytokine pathway is the target of the FDA-approved drug ixekizumab, which is used to treat individuals with moderate to severe plaque psoriasis. Type 17 helper T cells produce the proinflammatory cytokine IL-17.

METHODS:

Results of phase III clinical trials for the drug ixekizumab have been reviewed to see the positive response of the psoriatic patient to the therapy. This study is based on several previous studies conducted for ixekizumab to show its use in moderate to severe plaque psoriasis.

RESULT:

The study of Ixekizumab was in three clinical phase trials: [4]

1. UNCOVER-1
2. UNCOVER-2
3. UNCOVER-3

UNCOVER-1 -- 1296 patients with psoriasis and treated with ixekizumab were compared. Researchers randomly distributed patients into 1:1:1 ratio and received 80mg ixekizumab for every two weeks, 80mg ixekizumab for every 4 weeks, and a placebo, respectively. “The group of two-week received a 160 mg initial dose at week zero and 80 mg every two weeks for a period of 12 weeks. The group of the four-week received 160 mg initial dose at week zero, and 80 mg every four weeks for a period of 12 weeks”. The placebo group received a placebo for a period of 12 weeks. The therapeutic efficacy was measured by the “psoriasis area and severity index (PASI)” score and a “score of 90 means a 90% reduction of skin lesions” in psoriasis. At the end of 12 weeks, it was observed that PASI 90 scores of the two-week, four-week, and placebo groups were the following “70.9%, 64.6%, and 0.5%, respectively”, and were statistically significant. [4]

UNCOVER-2 -- In this trial Ixekizumab treatment in 1224 patients with psoriasis was compared. The treatment regimen of UNCOVER-1 was followed, with one added treatment group which was receiving etanercept 50 mg twice a week for a period of 12 weeks. At the end of 12 weeks, it has been observed that the “two-week, four-week, etanercept, and placebo groups had PASI 90 scores were 70.7%, 59.7%, 18.7%, and 0.6%, respectively”. [5]

UNCOVER-3 -- 1346 patients with psoriasis and receiving ixekizumab as a treatment were compared. This study also used the treatment regimens same as in UNCOVER-2. At the end of 12 weeks, the two-week, four-week, etanercept, and placebo groups were PASI 90 scores of 68.1%, 65.3%, 25.7%, and 3.1%, respectively. [6]

These three phases of phase III clinical trials were conducted to assess the safety and efficacy of different doses and different frequencies of drugs ixekizumab. “In UNCOVER I it was compared to a placebo while in UNCOVER II & UNCOVER III ixekizumab was compared with a placebo as well as etanercept”.

CONCLUSIONS:

Ixekizumab has proved to be safe and efficacious in the treatment of moderate to severe plaque psoriasis. Further data are necessary to confirm its safety and efficacy for which conduction of more studies is needed.

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