

Effectiveness and Safety of Adalimumab versus Infliximab in Refractory Uveitis: A Systematic Review and Meta-Analysis with Moderator Evaluation

INPLASY2025100062
doi: 10.37766/inplasy2025.10.0062
Received: 17 October 2025
Published: 17 October 2025

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ADMINISTRATIVE INFORMATION

Support - None.
Review Stage at time of this submission - Data analysis.
Conflicts of interest - None declared.
INPLASY registration number: INPLASY2025100062

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 October 2025 and was last updated on 17 October 2025.

INTRODUCTION

Review question / Objective P: Patients; with refractory uveitis; I: Adalimumab; C: Infliximab; O: Remission rate, reduction of central macular thickness, glucocorticoid-sparing effect, adverse events. Meta-regression with moderator of age, gender, follow-up duration.

Condition being studied Uveitis is a sight-threatening ocular inflammatory disease that affects both children and adults with multiple etiologies. According to a population-based study in the United States, the annual prevalence rates were 57.5 and 58.0 per 100000 persons, posing a significant risk of vision loss. This condition not only significantly reduces patients' quality of life, but also causes a considerable socioeconomic burden.

METHODS

Search strategy PubMed, Embase, Cochrane Library and Web of Science.

Participant or population Studies involving all causes of uveitis, including Behçet's disease, juvenile idiopathic arthritis (JIA), sarcoidosis, and other etiologies. Research including only refractory cases, defined as patients who had received immunomodulatory agents and corticosteroid but failed to achieve remission. They then started to use adalimumab or infliximab.

Intervention Patients with refractory uveitis used adalimumab.

Comparator Patients with refractory uveitis used infliximab.

Study designs to be included Patients with refractory uveitis used infliximab.

Eligibility criteria
Exclusion criteria
(1) Studies including patients who had been previously treated with biologic agents;

(2) Abstracts, literature reviews, or meta-analyses;
(3) Studies with incomplete or poor-quality data, including the absence of confidence intervals (CI) or standard deviations (SD).

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If multiple studies were derived from the same database, only the study with the largest patient population was included to avoid duplication and statistical bias.

No restrictions will be applied regarding publication year or language.

Information sources PubMed, Embase, Cochrane Library and Web of Science.

Main outcome(s) Remission rate, reduction of central macular thickness, glucocorticoid-sparing effect, adverse events.

Quality assessment / Risk of bias analysis Newcastle–Ottawa Scale.

Strategy of data synthesis All statistical analyses will be performed using Comprehensive Meta-Analysis software version 3.3. For dichotomous outcomes, odds ratios (ORs) or risk ratios (RRs) with corresponding 95% confidence intervals (CIs) are calculated, while continuous variables are analyzed as mean differences (MDs) or standardized mean differences (STDs) with 95% CIs. The heterogeneity across included studies will be assessed with the I² statistic, and an I² of > 50% indicated at least moderate heterogeneity. Random-effects model will be primarily applied to provide solid and qualitative results because of expected clinical heterogeneity. A p value of <0.05 indicated statistical significance. Publication bias is assessed by funnel plot and Egger's test, which p<0.05 means no statistically significant publication bias. Meta-regression is applied with moderator variable of age, gender and follow-up duration.

Subgroup analysis None.

Sensitivity analysis comparing fixed- and random-effects models.

Language restriction No.

Country(ies) involved Taiwan.

Keywords refractory uveitis, adalimumab, infliximab.

Contributions of each author
Author 1 - Chih Chien Wang.