

INPLASY

Incidence of HBV Reactivation in Psoriasis Patients Undergoing Cytokine Inhibitor Therapy

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ADMINISTRATIVE INFORMATION

Support - No.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202490005

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 2 September 2024 and was last updated on 2 September 2024.

INTRODUCTION

Review question / Objective P: Psoriasis Patients with HBV history; I: Cytokine Inhibitor Therapy; O: incidence of HBV Reactivation.

Rationale Biologic agents targeting TNF- α , IL-17, and IL-23 have significantly improved the treatment of moderate to severe psoriasis but carry the risk of HBV reactivation (HBVr), which can cause severe liver damage. The risk of HBVr is well-documented with TNF- α inhibitors, but less understood with cytokine inhibitors (IL-12/23, IL-17, IL-23 inhibitors). This study aims to evaluate HBVr risk in psoriasis patients receiving cytokine inhibitors through a retrospective review and systematic analysis.

Condition being studied Psoriasis is a chronic skin condition characterized by rapid skin cell proliferation, leading to red, scaly patches. It affects 2-3% of the global population. In moderate to severe cases, biologic treatments are used,

which, while effective, increase the risk of HBV reactivation, a serious and potentially fatal condition.

METHODS

Search strategy Databases: including PubMed, Embase, Web of Science, and the Cochrane Central Register of Controlled Trials, spanning from their inception until July 2, 2024.

Terms: Psoriasis AND (interleukin 17 OR interleukin 23 OR interleukin12/23) AND HBV reactivation.

Participant or population Psoriasis Patients with HBV history.

Intervention underwent Cytokine Inhibitor Therapy.

Comparator Nil.

Study designs to be included Observational studies and randomized controlled trials.

Eligibility criteria Excluded: 1. the article was not related to the main topic the publication types other than original article; 2. lacked HBV status reporting 3. overlapping population.

Information sources PubMed, Embase, Web of Science, and the Cochrane Central Register of ControlledTrials.

Main outcome(s) HBV reactivation happened.

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

Strategy of data synthesis A random-effects meta-analysis of single proportions was conducted to estimate the pooled rate of HBV reactivation, and statistical heterogeneity among the studies was assessed using the I^2 statistic.

Subgroup analysis Subgroup analyses were stratified by type of cytokine inhibitors, geographic regions, and HBsAb status.

Sensitivity analysis using the one-study removal method.

Language restriction Nil.

Country(ies) involved Taiwan.

Keywords hepatitis B virus;HBV reactivation; cytokine Inhibitors; interleukin-17, interleukin-23 ; psoriasis.

Contributions of each author

Author 1 - Meng Hsuan Kuo - analyzed the data and wrote the paper.

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