Vasculitis – small vessel vasculitis

Background: The use and benefit of biologic targeted therapy in the treatment of refractory manifestations of Behcet’s syndrome remain unclearly defined due to the relative paucity of published research. Neuro-vascular Behcet’s disease represents a challenging clinical presentation. The lack of identified effective strategies in the management of refractory neuro-vascular Behcet’s adds to the disease burden and contributes to lack of tight control. [1-3]

Objectives: The aim of this systematic review and meta-analysis is to examine the effect of anti-TNF therapy on refractory NBD by performing a systematic review and meta-analysis of the previously published studies assessing the effectiveness of anti-TNF therapy in patients with BD having refractory or recurrent neurological manifestations.

Methods: Authors used the PICO Model (P= population, I= intervention, C= comparator, O= outcome) used for designing the research question. The PRISMA statement was used for developing the study protocol search methodology. Literature searches were done for articles published in English language only from January 2000 till January 2020 (considering the first till the last available publication that addresses the research question and satisfied eligibility criteria).

The study was registered on the Prospero PROSPERO website for systematic reviews and meta-analysis. Random-effects meta-analysis was performed. Inter-study heterogeneity was explored using I² statistics. Cumulative meta-analysis was conducted to assess temporal trend for accumulating evidence from accruing published studies. Meta-regression was used to analyze possible confounders.

Authors of the current systematic review and meta-analysis worked on a simple score “Hamdy and Woldeamanuel simple response score, 2020,” the aim behind the score was to incorporate standard evaluation parameters for assessment of responses driven by the measures used in each study. The authors used numerical values to grade the pattern of response in each parameter considering attempting to standardize the quantification of the responses and minimize tendency towards overestimation. The score included clinical and radiographic points rated on a scale of 5.

Results: Twenty-one studies involving 64 patients were included, 52 male patient and 12 females at a ratio of 4.3:1, with a mean age of 38.21 years, mean disease duration of 84.76 5 months. Effect size analysis showed that 59 out of 64 patients i.e. 93.7% of the treated patients with neuro-Behcet’s disease in the analysis were responders to infliximab therapy (CI 88% - 99.3%). There was no significant inter-study heterogeneity (I² = 0%, p = 0.744). Cumulative analysis showed accumulating evidence favoring increasing effectiveness over the last 20 years. There was no statistically significant confounding of infliximab effect size by age (p = 0.89), sex ratio (p = 0.29), and disease duration (p = 0.67).

Conclusion: In this systematic review and meta-analysis Infliximab showed a strong therapeutic effectiveness in the treatment of refractory neuro-Behcet’s disease. There is an increasing trend of effectiveness observed in the last two decades which may be due to improved neuro-Behcet’s diagnostic accuracy.

REFERENCES: