

Poster presentation

CD4+ guided antiretroviral treatment interruption. A meta-analysis

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Purpose of the study

The aim of this meta-analysis study was to evaluate the risk of death or AIDS defining event associated to CD4+ guided treatment interruption in patients with chronic HIV infection.

Methods

A search was conducted using PubMed from 1/1/2000 to 31/12/2007. Heterogeneity was assessed through the Cochran Q test and measured through the I² index proposed by Higgins & Thompson. Pooled relative risk e pooled risk difference was calculated by use of random effects model following DerSimonian & Laird methods. Data were analysed using Stata statistical software version 9.0.

Summary of results

555 full papers were found, all abstracts were screened and 58 full text articles for potential inclusion were retrieved and seven were retained. The seven studies included 3,409 patients that interrupted the therapy, and 3,173 patients that continued antiretroviral therapy. Meta-analysis of the studies with a follow up >100 p/y showed that the pooled relative risk of AIDS defining event or mortality was 2.59 (95% CI 1.87–3.34; $p < 0.001$) (Q statistic for heterogeneity = 1.31, DF = 2, $p = 0.52$ I² = 0); the pooled risk difference of AIDS defining event or mortality was 0.02 (95% CI -0.01–0.05; $p = 0.168$) (Q statistic for heterogeneity = 35.11, DF = 3, $p < 0.001$, I² = 91.5%, 95%CI 81.3–96.1%). The pooled relative risk of AIDS defining event or mortality corrected for latest CD4+ value was 1.77 (95% CI 1.29–2.42; $p < 0.001$)

(Q statistic for heterogeneity = 0.82, DF = 2, $p = 0.66$, I² = 0), the pooled risk difference of AIDS defining event or mortality corrected for latest CD4+ value was 0.01 (95% CI -0.01–0.02; $p = 0.37$) (Q statistic for heterogeneity = 10.59, DF = 3, $p = 0.014$, I² = 71.7%, 95%CI 19.5–90%). The pooled relative risk of death for any cause was 1.8 (95%CI 1.18–2.77; $p = 0.007$) (Q statistic for heterogeneity = 0.82, DF = 2, $p = 0.66$ I² = 0), the corresponding pooled risk difference was 0.01 (95%CI 0.001–0.012; $p = 0.03$), (Q statistic for heterogeneity = 3.09, DF = 3, $p = 0.38$, I² = 2.9%, 95%CI 0–85.1%).

Conclusion

This meta-analysis suggests that in patients undergoing a treatment interruption there is an increased relative risk of developing AIDS or death; this risk is decreased if a relatively high CD4+ threshold is chosen to reinstate the treatment. The pooled risk difference was of small entity and did not reach statistical significance.