WHAT IS THE CLINICAL EFFECTIVENESS OF ERYTHROPOIESIS STIMULATING AGENTS FOR THE TREATMENT OF CANCER TREATMENT-INDUCED ANAEMIA?

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Aim: Anaemia is a common side-effect of cancer treatments and can lead to a reduction in quality of life. Erythropoiesis-stimulating agents (ESAs) are licensed for use in conjunction with red blood cell transfusions (RBCTs) to improve cancer treatment-induced anaemia (CIA). We aim to review the clinical-effectiveness evidence for ESAs for treating CIA.

Methods: The clinical effectiveness review followed principles published by the NHS CRD. Electronic databases and grey literature sources were searched up to December 2013. Randomised controlled trials (RCTs) comparing ESAs in accordance with their EU licenses (based on start dose administered) with best supportive care, placebo, or other ESA in adults with CIA were included. Anaemia- and malignancy-related outcomes, health-related quality of life (HRQoL), and adverse events (AEs) were extracted from primary studies. Where appropriate, data were pooled using random-effects meta-analyses.

Results: Twenty-three RCTs were included in the review. None of the RCTs were completely aligned with current EU licenses. Results suggest that there is clinical benefit from ESAs for anaemia-related outcomes. Sixty-three percent of participants who received ESAs achieved a haematological response compared with 18% of participants who did not receive ESAs, and there was a reduction in requirement for RBCT by an estimated 37% with ESAs. Data also suggest some improvement in HRQoL scores (FACT-F, FACT-G and FACT-An). The impact of ESAs on malignancy-related outcomes and AEs is uncertain. The overall survival (OS) results (HR 0.97, 95% CI 0.83, 1.13, I² of 42.4%) suggest no effect of ESAs on OS. Although all AEs were relatively rare (max. 6%), an increased risk for thromboembolic events, pruritus and hypertension was found. Post-hoc sensitivity analyses suggested that the effectiveness for some outcomes was improved when ESAs were evaluated ‘closer to licence’.

Conclusions: Although results from the review suggest that ESAs may be beneficial when used closer to their licensed indications, this trend should be interpreted with caution due to high statistical heterogeneity, wide confidence intervals, multiple testing, and the licence interpretation.

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