

Postsurgical infections in cardiac surgery in transfused patients with allogeneic RBCs: Meta-analysis

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The immunomodulatory effect of blood components transfusion remains an important topic. We performed an extensive review and meta-analysis of the literature on infections in patients undergoing transfusion in cardiac surgery. The study was performed for both systemic and respiratory infections, and for effectiveness of leukocyte filtration. We performed an extensive search through PUBMED including randomized and observational studies. Results are detailed as pooled odds ratio (OR), confidence intervals (CI) at 95%, I² test and funnel plot for heterogeneity and bias. For the Classic fail-safe N Alpha value =0,05. For systemic infections (8 papers), the I² was 69,7. The pooled OR using random effects is 2,73 (95% CI 2,23 -3,33) p=0.000. The fail-safe=775 studies. The funnel plot does not suggest particular levels of bias. For respiratory infections (6 papers) the I² was 88,7 with a high heterogeneity. The pooled OR were 4,7 (95% CI 2,79-8,22) p=0.000. The fail-safe=406 studies. Transfusion of not filtered RBC showed a minimal increase of post-operative infection when compared with the filtered ones, OR 1,34 (0,9-1,95 CI. 95%) p=0,11. Post-operative infections In cardiac surgery are significantly increased in transfused patients OR 2,73, and even more considering respiratory infections only, OR 4,7. While for the comparison between filtered and not filtered RBC we found a minimal and not significant increase of infection in the not filtered RBC OR 1,34.

Biography

Marco Lai graduated at the School of Medicine, State University of Sassari, Italy. He is specialized in Clinical and Laboratory Hematology at the Catholic University of Sacred Heart, Roma Italy. He is in charge for the Immunohematology laboratory. He has published more than 30 papers in reputed journals.

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