

Comparison of deferiprone to deferasirox and deferoxamine to cardiac and hepatic T2 MRI in thalassemia patients: evidence-based case report / Pustika Amalia Wahidiyat, Mikhael Yosia, Teny Tjitra Sari

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Abstrak

ABSTRACT

Background: there are currently three iron chelator readily available for patients Indonesia; deferiprone/DFP (branded as Ferriprox), deferasirox/DFX (branded as Exjade) and deferoxamine/DFO (branded as Desferal). This study aims to determine which iron chelator is the most efficient in reducing cardiac and hepatic iron overload (measured by means of T2 MRI). Methods: journal search with determined MeSH term was done in PubMed and Scopus. Studies that looked upon thalassemia major patient in all ages with usage of monotherapy iron chelation and its effect on myocardial T2 MRI and/or liver T2 MRI was included. Appraisal of studies was done using Oxford CEBM appraisal tools and Joanna Brigs Institute critical appraisal tools. Results: total of 11 studies with grand total of 611 samples were included. Mean T2 MRI value or (when available) mean changes in T2 MRI value after usage of specific iron chelator was gained from all the studies included. Comparison study and individual studies shows better control and increase of myocardial T2 MRI in those with DFP, and of liver T2 in those with good adherence to DFO chelation. Conclusion: DFP is superior in controlling or reducing myocardial iron load (as proven by mT2 MRI) and DFO had better capabilities in controlling or reducing hepatic iron load (as proven by liver T2* MRI). Studies with longer observation and larger samples is needed to see a significant changes of T2 MRI in DFX.