P-095 - A SYSTEMATIC LITERATURE REVIEW OF ENZYME REPLACEMENT THERAPY IN EARLY-ONSET POMPE DISEASE

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INTRODUCTION: Pompe disease (PD) is an inherited disorder characterized by the deficiency of acid alpha-glucosidase, leading to progressive glycogen accumulation in the tissues. The former untreatable perspective of the disease has changed since the approval of enzyme replacement therapy (ERT). Previous systematic review (SR) on early-onset PD (EOPD) haven't evaluated important endpoints such as quality of life (QOL) and safety, thus creating the need for new assessments of clinical outcomes. OBJECTIVE: To evaluate evidence available on the efficacy and safety of ERT for EOPD. METHODS: We systematically searched Medline/PubMed and Embase for prospective clinical studies published evaluating ERT for EOPD. Exclusion criteria were retrospective and transversal studies, trials with less than 5 patients and preclinical studies. We defined a priori the following outcomes as of interest: safety, quality of life, survival, time to onset of ventilation (TOV), deglutition disorder, cardiomyopathy, myocardial function and neuropsychomotor development. Assessment of quality of evidence was performed according to the GRADE criteria. RESULTS: A total of 1470 articles were identified, 42 studies were eligible for full text reading and subsequently, 13 articles were included in our analysis. Only three of the endpoints analyzed in this study had moderate or high GRADE scores favoring ERT. Survival was evaluated in 6/13 studies and increased in all of them (GRADE moderate). TOV was evaluated in 7/13 studies and 4/7 showed its increase by ERT (GRADE high). Cardiomyopathy was evaluated in 10/13 by left ventricular mass, reduced in 8/10 studies after ERT (GRADE moderate). Safety data were described in 6/13 studies (GRADE low) and all analyzed antibody formation, present in at least 85% of patients evaluated. Antibody titers were not correlated with severe adverse events (AEs) or infusion-associated reactions (IARs) nor were associated with treatment efficacy and clinical outcomes. Regarding IARs, most were mild to moderate in severity DISCUSSION: Our results add information over previous published SR on ERT, as includes data from observational prospective studies, showing benefit for survival, TOV and cardiomyopathy. Findings suggest ERT is safe in EOPD, once most AEs were mild to moderate and antibody formation did not seem to interfere with any outcome evaluated.