LONG-TERM SAFETY OF DEFERIPRONE IN CHILDREN WITH BETA-THALASSAEMIA MAJOR: COMPARATIVE DATA FROM LARGE MULTI-CENTRE PERSPECTIVE STUDIES

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Background

β-thalassaemia major causes severe anemia and iron overload in early childhood. Deferiprone (DFP) was the first licensed oral iron chelator and is available worldwide, also due to its off-patent status. However, insufficient safety and efficacy data in children limits its use under the age of 10 years. To generate novel safety data in children, we conducted the DEEP-3 observational safety study of DFP alone and in combination with deferoxamine (DFO) in pediatric patients aged under 18 years from the Mediterranean region.

Method

Medical patient data and possible adverse drug reactions (ADRs) to DFP were collected retro- and prospectively from 16 thalassemia centers in Albania, Cyprus, Egypt, Greece, Italy and Tunisia. Incidences and incidence rates for serious and non-serious DFP-related ADRs were analyzed using the Kaplan-Meier failure function. Potential risk factors for ADRs and treatment discontinuations were explored using multivariate logistic regression and Cox proportional hazards methods.

Results

We analyzed 297 patients (median age 8.5 years, IQR 4.0-12.2): 35.0% (95% CI 29.6-40.7) experienced at least one ADR. Most ADRs were of mild or moderate severity. Agranulocytosis was the most serious ADR to DFP with incidence 0.7% (95% CI 0.1-2.4) and incidence rate 0.3 per 100 person-years (95% CI 0.0-1.0). Mild-to-moderate neutropenia, arthropathy, increased transaminases, and gastrointestinal disorders were other important ADRs and led to therapy discontinuation in 23.2% of patients. No unexpected ADRs or specific risk factors for ADRs were identified.

Conclusion

The safety profile of DFP in children and adolescents is in accordance with the latest information in SPCs and manufacturer post-marketing data. The risk for agranulocytosis in children treated with DFP is comparable to older patients. There was no increased risk for ADRs in children under the age of 10 years or in patients with combined therapy with DFO.