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Etanercept in juvenile idiopathic arthritis: Who will benefit?

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Background

The pharmacological treatment approach for juvenile idiopathic arthritis (JIA) has changed substantially since the introduction of biologicals, with nowadays inactive disease as realistic treatment goal.

Aim

To identify factors at baseline which predict etanercept treatment response and subsequently optimize treatment strategies.

Methods

The Arthritis and Biologicals in Children Register (observational study, ongoing since 1999), includes all Dutch JIA-patients who used etanercept. Disease activity variables were retrieved prospectively at start of treatment, after 3 months, and yearly thereafter.

Results

262 previously biologic-naive JIA-patients initiated etanercept; 71% female, 18% systemic-onset subtype. Median age at onset 6.9 (IQR 3.6-11.1) years, median follow-up 35.6 (IQR 17.4-53.6) months. In the long-term, the overall majority responded to etanercept and up to 40% reached inactive disease. Excellent response after 15 months (85 patients, 32%) was associated with low baseline disability (OR 0.49/point increase, 95%CI 0.33-0.74), fewer DMARDs used before etanercept (OR 0.64/DMARD used, 95%CI 0.43-0.95) and younger age at onset (OR 0.92/year, 95%CI 0.84-0.99); poor response (88 patients, 34%) was associated with female gender (OR 2.12, 95%CI 1.11-4.08) and systemic-onset subtype (OR 3.24, 95%CI 1.39-7.56). However, 24% of systemic-onset patients reached excellent response. Reasons for discontinuation: ineffectiveness in 78, adverse events (AEs) in 25, remission in 39 patients. Etanercept was well tolerated. Patients who developed AEs could not be identified at baseline.

Conclusions

Excellent response was associated with baseline low disability and less DMARD-use before etanercept. Therefore, the focus should be on strategies with early introduction of etanercept to improve outcomes for JIA. The role of etanercept for the systemic-onset subtype remains debatable.

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