TITLE: Rituximab for the Treatment of Autoimmune Hemolytic Anemia: Clinical Evidence and Guidelines

DATE: 31 March 2011

RESEARCH QUESTION

1. What is the clinical evidence regarding the use of rituximab for the treatment of autoimmune hemolytic anemia?

2. What are the guidelines for the use of rituximab for the treatment of autoimmune hemolytic anemia?

KEY MESSAGE

The evidence based on nonrandomized studies suggests that rituximab is clinically effective in the treatment of autoimmune hemolytic anemia.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2011, Issue 2), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and March 16, 2011. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.
RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

The literature search identified 12 non-randomized studies on the use of rituximab for the treatment of autoimmune hemolytic anemia (AIHA). No relevant health technology assessment reports, randomized controlled trials, or guidelines were identified. Other articles of potential interest are included in the appendix.

OVERALL SUMMARY OF FINDINGS

Of the six identified retrospective studies, five found rituximab to be clinically effective in the treatment of AIHA. In the study where rituximab was not successful, limited information could be gained from the abstract as to why treatment was not effective. All other studies, three case studies and three multicenter trials, confirmed rituximab’s positive effects in the treatment of AIHA, whether in combination therapy or with refractory AIHA.

Study populations encompassed both children and adults separately as well as mixed. When reported, rituximab was administered at the dose of 375mg/m(2) weekly for four weeks. Variations did occur, such as in one study the dose was 100mg per week for 4 weeks eliciting a partial response in the one patient with AIHA. In another study focusing on pediatric patients with mixed hematologic autoimmune cytopenias, the dosage was increased to 750mg/m(2) per week for three weeks if the patient showed no response after three weeks to the regimen of 375mg/m(2) per week for four weeks. Overall, results in this study were positive but the success rate of the six children with AIHA was not reported separately. In two studies, after treatment with rituximab, progression free survival (PFS) was at 72% after one year and fell to 56% at two years, while median PFS was not reached in the other study. In some studies, relapse of AIHA did occur after treatment with rituximab, however subsequent treatments resulted in favorable results. Reported adverse effects included a transitory rash, hypogammaglobulinemia, absence of antibody response to polysaccharide vaccines, neutropenia, pneumonia, and anaphylaxis.
REFERENCES SUMMARIZED

Health technology assessments
No literature identified.

Systematic reviews and meta-analyses
No literature identified.

Randomized controlled trials
No literature identified.

Non-randomized studies


PubMed: PM18055995

PubMed: PM17880618

PubMed: PM17532766

PubMed: PM17264951

PubMed: PM16321854

Guidelines and recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Review articles


Other


