Screening for Rh (D) Incompatibility: A Brief Evidence Update for the U.S. Preventive Services Task Force

Methodology

A general search strategy, limited to the English language and the years 1994–2002, was used to search MEDLINE. Because no clearly defined MeSH headings were relevant to this topic, the search strategy focused on a series of key terms. The following key terms yielded 1,154 articles: Rh (D) Immune Globulin, Rh-Hr Blood-Group System, Erythroblastosis, and Fetal, Rh Isoimmunization.

This general search strategy was refined into a combined search strategy linking Rh (D) incompatibility with screening (29 records), meta-analyses (1 record), reviews (132 records), randomized controlled trials (RCTs) (14 records), outcomes (37 records), and editorials (20 records) for review. The search strategy was expanded in response to expert reviews to include amniocentesis and fetal antigen as well as fetal anemia detection.

Citations were analyzed and abstracts that fit the eligibility criteria for assessment were culled. Full-text articles based on potentially suitable abstracts were obtained and reviewed for inclusion or exclusion. These findings are detailed below.

Key Questions and Results

1. Is there new, direct evidence that screening for Rh (D) incompatibility leads to reduced maternal morbidity or mortality?

We found no RCTs with direct evidence addressing the role of screening for Rh (D) incompatibility leading to reductions in maternal morbidity or mortality.

2. Have new screening tests been developed and tested to show improvement in the health outcomes of Rh (D) incompatibility?

We found no RCTs with direct evidence addressing new screening tests that have been developed and tested to show improvement in health outcomes of Rh (D) incompatibility. However, we did identify two studies that suggest...
that Doppler ultrasonography is an accurate noninvasive screening test for fetal anemia in pregnancies complicated by Rh (D) incompatibility.3,4

3. Have new treatment protocols been developed and tested to show improvement in health outcomes of Rh (D) incompatibility?

We found no RCTs with direct evidence addressing new treatment protocols developed and tested to show improvement in health outcomes of Rh (D) incompatibility.

4 and 5: Have new harms been identified for screening or treatment of Rh (D) incompatibility and/or has stronger evidence for existing harms become apparent?

We found no RCTs with direct evidence identifying either new or stronger harms associated with screening or treatment of Rh (D) incompatibility.

Summary

No RCTs that addressed the 5 key questions were identified by this review. Nevertheless, 2 studies suggest that Doppler ultrasonography is an accurate noninvasive screening test for fetal anemia in pregnancies complicated by Rh (D) incompatibility.3,4

No ongoing research was identified in this review.

Recommendations of Professional Organizations

The Canadian Task Force on Preventive Health Care recommendation on screening for Rh (D) incompatibility can be accessed at http://www.ctfphc.org/.

The guidelines from the American College of Obstetricians and Gynecologists (ACOG) can be found in the ACOG Practice Bulletin.5

References


