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No. 363-Investigation and Management of Non-immune Fetal Hydrops

This Clinical Practice Guideline prepared by the authors, and approved by the Society of Obstetricians and Gynaecologists of Canada (SOGC)'s Genetics Committee and Board of Directors.

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Disclosure statements have been received from all authors.

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Key Words: Non-immune hydrops fetalis, fetal hydrops, fetal therapy, fetal metabolism

Abstract

Objective: To describe the current investigation and management of non-immune fetal hydrops with a focus on treatable or recurring etiologies.

Outcomes: To provide better counselling and management in cases of prenatally diagnosed non-immune hydrops.

Evidence: Published literature was retrieved through searches of PubMed or MEDLINE, CINAHL, and The Cochrane Library in 2017 using key words (non-immune hydrops fetalis, fetal hydrops, fetal therapy, fetal metabolism). Results were restricted to systematic reviews, randomized controlled trials/controlled clinical trials, observational studies, and significant case reports. Additional publications were identified from the bibliographies of these articles. There were no date or language restrictions. Searches were updated on a regular basis and incorporated in the guideline to September 2017. Grey (unpublished) literature was identified through searching the websites of health technology assessment and health technology-related agencies, clinical

CHANGES IN PRACTICE

1. Fetal chromosome analysis through aCGH (microarray) molecular testing should be offered where available in all cases of non-immune fetal hydrops.
2. Fetal autopsy is strongly recommended in all cases of fetal or neonatal death or pregnancy termination for which no diagnosis is reached prenatally.

KEY MESSAGES

1. All patients with fetal hydrops should be referred promptly to a tertiary care centre for evaluation.
2. Some conditions amenable to prenatal treatment represent a therapeutic emergency after 18 weeks.
3. To evaluate the risk of fetal anemia, Doppler measurement of the middle cerebral artery peak systolic velocity should be performed in all hydropic fetuses.

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practice guideline collections, clinical trial registries, and national and international medical specialty societies.

Benefits, Harms, and Costs: These guidelines educate readers about the causes of non-immune fetal hydrops and its prenatal counselling and management. It also provides a standardized approach to non-immune fetal hydrops, emphasizing the search for prenatally treatable conditions and recurrent genetic etiologies.

Values: The quality of evidence in this document was rated using the criteria described in the Report of the Canadian Task Force on Preventive Health Care.

Recommendations:

1. All patients with fetal hydrops should be referred promptly to a tertiary care centre for evaluation. Some conditions amenable to prenatal treatment represent a therapeutic emergency after 18 weeks, allowing prolongation of pregnancy with improved fetal/neonatal outcomes (II-2A).
2. Fetal chromosome analysis through array comparative genomic hybridization (microarray) molecular testing should be offered where available in all cases of non-immune fetal hydrops (II-2A).
3. Imaging studies should include comprehensive obstetrical ultrasound (including arterial and venous fetal Doppler) and fetal echocardiography (II-2A).
4. Investigation for maternal–fetal infections and alpha-thalassemia in women at risk because of their ethnicity should be performed in all cases of unexplained fetal hydrops (II-2A).
5. To evaluate the risk of fetal anemia, Doppler measurement of the middle cerebral artery peak systolic velocity should be performed in all hydropic fetuses after 16 weeks of gestation. In case of suspected fetal anemia, fetal blood sampling and intrauterine transfusion should be offered rapidly (II-2A).
6. All cases of unexplained fetal hydrops should be referred to a medical genetics service where available. Detailed postnatal evaluation by a medical geneticist should be performed on all cases of newborns with unexplained non-immune hydrops (II-2A).
7. Autopsy is strongly recommended for all cases of fetal or neonatal death for which no diagnosis is reached prenatally (II-2A).