Familial haemophagocytic lymphohistiocytosis type 1

GENERAL INFORMATION

Description:

Familial hemophagocytic lymphohistiocytosis is a lethal disorder of immune regulation. It is a disorder of early childhood characterized by excessive, uncontrolled T-lymphocyte and macrophage activation. Infiltration of the liver, spleen, bone marrow, and central nervous system by activated T cells and macrophages results in a multisystem disorder.

Alternative names:

- FHL1, HLH1, HPLH1
- Familial erythrophagocytic lymphohistiocytosis
- Familial histiocytic reticulosis

Classification:

- Defects of phagocyte function
  - Familial haemophagocytic lymphohistiocytosis
    - Familial haemophagocytic lymphohistiocytosis type 1

Inheritance:

Autosomal recessive

OMIM:

- #267700 Reticulosis, familial histiocytic
- %603552 Hemophagocytic lymphohistiocytosis, familial, 1

Cross references:

Phenotype related immunodeficiencies:

- Familial haemophagocytic lymphohistiocytosis type 2
- Familial haemophagocytic lymphohistiocytosis type 3

Incidence:

1:50,000 births

CLINICAL INFORMATION

Description:

The symptoms may vary widely. The most common findings are unexplained high fever, irritability, general pain, oedema, hepatosplenomegaly, cytopenia (thrombocytopenia, anemia). This macrophage activation syndrome occur after a healthy period of several months after the birth to more rarely several years, and is usually triggered by viral infection. Other early symptoms include skin rash, lymph node enlargement, and neurologic abnormalities (bulging fontanel, neck stiffness, hypotonia, hypertonia, convulsions, cranial nerve palsy, ataxia, hemiplagia/tetraplagia, blindness and unconsciousness). Median survival is of 2 months.

Diagnosis:

Diagnostic laboratories:

Clinical:

- Familial hemophagocytic lymphohistiocytosis (FHL), ORPHANET
- Lymphohistiocytosis, eMedicine

Genetic:

- GeneTests

Therapeutic options:

- Treatment with epipodophyllotoxins, immunosuppressive agents, corticotherapy and anti thymocyte immunoglobulin (ATG) control macrophage activation and precede bone marrow transplantation. Intrathecal injections of methotrexate prevents or cures neuromeningeal disorders.
- Lymphohistiocytosis, eMedicine
- The Role of Blood and Marrow Transplantation as Treatment for Hemophagocytic Lymphohistiocytosis (HLH)
- Current Treatment Protocols, Histiocyte Society

Research programs, clinical trials:

- European Initiative for Primary Immunodeficiencies

GENE INFORMATION

Names:

Localization:

Chromosomal Location:

9q21.3-q22

Other gene-based resources:

PROTEIN INFORMATION

Description:

Other features:

Expression pattern for human:

OTHER RESOURCES

Societies:

General:

- International Patient Organization for Primary Immunodeficiencies
- Immune Deficiency Foundation
- March of Dimes Birth Defects Foundation
- NIH/National Institute of Allergy and Infectious Diseases
- European Society for Immunodeficiencies

Disease specific:

- Histiocyte Society
- Histiocytosis Association of America
- Histiocyte Society of Germany
- The Histiocytosis Association of Canada
- Artemis Society, Greek histiocytosis support group
- Associazione Italiana Ricerca Istiocitos (AIRI)