Hereditary Angioedema [HAE]

C1INH-HAE: [SERPING1]
&
normal-C1INH-HAE
[FXII-HAE (F12); PLG-HAE; ANGPT1-HAE]

Background

HAE is a rare, life threatening primary immunodeficiency that causes spontaneous oedema of the submucosal layers. The majority of cases are caused by pathogenic variants in the gene encoding C1INH (*SERPING1*) that alter either its synthesis (C1INH-HAE: type I) or function (C1INH-HAE type II). It affects approximately 1:50000 of the population. Rarely, HAE can present with normal C1INH (nl-C1INH-HAE) and is caused by variants in the *F12* gene (FXII-HAE c.983C>A or C>G, c.971_1018+24del and c.892_909dup) or due to a single variant in plasminogen (PLG-HAE, c.9886A>G; p.(Lys330Glu) or angiopoeitin1 (ANGPT1-HAE, c.355G>T; p.(Ala119Ser).

Inheritance: Autosomal dominant

Recommended Clinical Referral Criteria

- Initial diagnoses made by biochemical complement testing (C1INH concentration and functional, C3 and C4).
- FXII-HAE, PLG-HAE and ANGPT1-HAE testing can be used to exclude the diagnosis of unclassified HAE (U-HAE), or acquired angioedema (InH-AAE or ACEI-AAE).
- Diagnosis of the disease in newborns and children or in asymptomatic relatives.

Referring specialisms

- Referrals for diagnostic testing must come from an immunology or clinical genetics specialist
- Referrals for asymptomatic testing must come from a clinical genetics specialist

Molecular Analyses

C1INH-HAE:
Bi-directional sequence and MLPA dosage analysis of the coding region of *SERPING1*

nl-C1INH-HAE
FXII-HAE: Bi-directional sequence of *F12* Ex9
PLG-HAE: Bi-directional sequence *PLG* Ex9
ANGPT1: Bi-directional sequence *ANGPT1* Ex2

Test	TAT (calendar days)
Mutation screening and dosage analysis (*SERPING1*)	42
Targeted analysis (*F12*, Ex9; *PLG*, Ex9; *ANGPT1*, Ex2)	42
Testing for known familial mutations (*SERPING1*)	42

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Accredited to ISO 15189:2012
(8988)

Sample Requirements
Blood – 5ml in EDTA (1ml neonates/infants);
Please contact lab prior to sending a prenatal sample.
Please label samples with three identifiers and date of collection.

All samples must be accompanied by request form

Consent for testing & DNA storage is assumed when request for test received

Links

Orphanet
http://www.orpha.net/
OMIM
http://www.omim.org/
Genetic Test Registry
http://www.ncbi.nlm.nih.gov/gtr/

Support
http://www.immunodeficiencyuk.org/