Legius Syndrome (NFLS, Neurofibromatosis Type 1-like Syndrome) – OMIM 611431

Background

Legius syndrome is found in some people who have mild NF1-type symptoms, but have no pathogenic variant in the *NF1* gene (OMIM 613113). This condition is caused by a pathogenic variant in a different gene, *SPRED1* (OMIM 609291), and while freckling or café-au-lait patches can be present, there are usually no tumours or neurofibromas, and less likelihood of severe complications from the condition. Some patients with Legius syndrome suffer from learning difficulties and hyperactivity. The condition follows an autosomal dominant inheritance pattern so an affected adult has a 50% chance of having an affected child. Initial estimates of incidence were approximately 1/150000, but a recent study of *NF1* gene-negative patients detected approximately 3%, making the incidence more in the region of 1/100000.

Recommended Clinical Referral Criteria

- Patients with NF1-like symptoms that do not have a pathogenic variant detected in the *NF1* gene
- Family history

Molecular Analysis

Variant screen: Bi-directional sequence analysis and MLPA dosage analysis of the entire coding region of the *SPRED1* gene; data from our patient cohort since 2009 shows (2/45) 4% have had a pathogenic change detected
Family follow-up: Testing for known familial pathogenic variants in *SPRED1* gene

Turnaround Times (TAT)

Prices available on request, please contact the laboratory using details below.

Test	TAT (calendar days)
Test for known familial variants in *SPRED1*	28
Variant screening and dosage analysis (*SPRED1*)	42

Contact Details

All Wales Genomics Laboratory,
Institute of Medical Genetics,
University Hospital of Wales,
Heath Park,
Cardiff CF14 4XW
Tel: 029 2184 2641
Fax: 029 2184 4043

lab.genetics@wales.nhs.uk
http://www.wales.nhs.uk/AWMGS/

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

UKGTN
http://ukgtn.nhs.uk/
Orphanet
http://www.orpha.net/
OMIM
http://www.omim.org/
Genetic Testing Registry
http://www.ncbi.nlm.nih.gov/gtr/
Support
https://nervetumours.org.uk/what-are-nerve-tumours/allied-condition-legius-syndrome