Welcome to the fourth newsletter of the UK FSHD Patient Registry.

As of June 2019 there are 923 participants registered with the UK FSHD Patient Registry. That is an additional 153 participants since the previous newsletter issued in June 2017! A huge thank you is in order for all of the patients, clinicians, caregivers and patient organisations who have supported and contributed to this superb achievement.

1. Update your details

Every year you will receive a reminder to login and update your details. This is so we always have the most accurate information about you in the Registry.

Contact details: If we want to contact you about a study we think you might be interested in or provide updates like this newsletter it is important your e-mail, postal address and telephone number are up to date. Please note that your personal details are only available to a limited number of Registry staff and will never be given to a third party.

Your condition: This information will inform researchers if you are eligible to take part in a clinical trial or study. It may also be important for researchers wishing to look at how FSHD progresses in different people. Please check this information is up to date at least once a year and report any changes in circumstance, e.g. if you start using a wheelchair.

Pain and Quality of Life: We hope the information in these sections will help inform research in the future and potentially help develop standards of care too. If we can collect this information at different time points, evenly spaced a part (once a year) this will provide more information to show how FSHD can progress.
2. We need to know your genetic details

Your genetic diagnosis is one of the most important pieces of information within the Registry. This is currently provided by your neuromuscular consultant. However, if you do not see a neuromuscular consultant (though we recommend you do), it is still important we have this information. Most studies and trials looking for participants will only include people with genetically confirmed FSHD. If you have a copy of your genetic report this can be sent directly to the registry curator. Alternatively you can speak to your consultant (neuromuscular specialist) next time you have an appointment and they should be able to provide you with a copy. If you have any questions, or are unsure if we have your genetic details please contact the Registry curator, Ben Porter, fshdregistry@treat-nmd.eu

3. New studies and research updates

Recruitment through the UK FSHD Registry - FSHD clinical trial survey

The importance of ensuring clinical trials are patient friendly is paramount to recruitment and retention. This is especially important in the area of rare diseases where patient numbers are much smaller, such as those seen in FSHD. Currently there is no effective treatment option for FSHD. Fulcrum Therapeutics enquired with the UK FSHD Patient registry to obtain patient input on various factors worth considering for a potential study design for FSHD. This involved participants viewing patient and study information then completing an online survey provided by Fulcrum Therapeutics.

Eligible participants from the registry were selected based on a list of criteria provided by the company and were informed of the proposed survey.

Both Fulcrum Therapeutics and I would like to thank all of those participants who engaged with the survey, this input should ensure that any future clinical trials initiated are patient-centric!

New treatments in development

Resolaris (ATYR1940) has been developed as an injection into the vein, by aTyr Pharma. It is a protein designed to control the immune response in the muscle. Resolaris has been safe and well tolerated in patients aged 16-20 years with early-onset FSHD. Further investigation is warranted for this treatment option https://www.nmd-journal.com/article/S0960-8966(17)30954-9/abstract

ACE-083 is being developed as an injection into the muscle, by Acceleron Pharma. It is designed to bind to and selectively stop certain proteins that reduce muscle growth. Previously ACE-083 has been safe and well tolerated, displaying increases in total muscle volume and decreases in fat friction in adults with FSHD. As a treatment it continues to be investigated in a phase II clinical trial that is expected to be complete in the first half of 2020 (https://clinicaltrials.gov/ct2/show/NCT02927080)

Losmapimod is an investigational treatment originally developed by GlaxoSmithKline (GSK) for various conditions including acute coronary syndrome. In 2015, GSK stopped development of this after a phase III clinical trial failed to demonstrate that losmapimod was any better than placebo at preventing major cardiovascular events. Since then Fulcrum Therapeutics have bought the global rights to this treatment and have completed early (pre-clinical) testing of losmapimod in patient-derived cell models. It was found that the treatment suppresses DUX4 expression, the gene that is involved in FSHD, and restores a healthy muscle phenotype. Fulcrum Therapeutics expects to initiate a phase IIb clinical trial in FSHD, in mid-2019, with clinical trial sites located in the US and Europe.
https://static1.squarespace.com/static/57643b13bebaf64570880021/t/5cbe34a40852293126249224/1555969189392/Fulcrum_GSK_Apr.23.19.pdf

For updates on new clinical trials please visit: https://clinicaltrials.gov/ and https://www.clinicaltrialsregister.eu/ctr-search/search
Research publications through the UK FSHD Registry

In March 2018, “Chronic pain has a strong impact on quality of life in facioscapulohumeral muscular dystrophy”, co-authored by Libby Wood and Teresinha Evangelista, was published online (http://doi.org/10.1002/mus.25991). The registry data was analysed for this study.

The aim of this paper was to determine the frequency, localisation and intensity of pain in the FSHD1 population and to evaluate the influence of pain, age, sex, disease duration and ambulatory status on quality of life (QoL). Recent studies have indicated that pain may be present in the majority of FSHD patients and that pain negatively impacts on quality of life (QoL) and adds an increased disease burden. At present the data available is scarce, often not FSHD specific and is usually clinician reported.

Results:
- Pain is highly prevalent in those with FSHD1.
- Female FSHD1 patients experience pain more frequently than males.
- Chronic pain was not significantly correlated with current age, age of onset or disease duration.
- Chronic pain and severity were not significantly correlate with D4z4 fragment size or motor function.
- More than 90% of patients reported taking medication.
- Patients perceive a deterioration in QoL in line with disease progression – the younger the age of onset and the longer the disease duration, the greater the perception of disability.

In April 2019, “Phenotype may predict the clinical course of facioscapulohumeral muscular dystrophy”, co-authored by Phillip Cammish and Hanns Lochmuller was published online (http://doi.org/10.1002/mus.26474). The registry data was analysed for this study.

The aim of this paper was to verify the previous observations that patients with the B1 phenotype, which characterises patients with scapular muscle weakness with or without lower limb involvement but always without facial muscle weakness, have a less severe form of the disease than patients with the typical FSHD (A) phenotype.

Results:
- The correlation between clinical appearance of the disease and molecular variations is not straightforward
- There is a milder and slower progressive phenotype in patients with FSHD type 1 without facial involvement
- A different disease course occurs in the two clinical subgroups of FSHD (B1 and A).

A poster titled “The UK FSHD Patient Registry: A Key Tool in the Facilitation of Clinical Research”, was presented at the FSH Society FSHD International Research Congress & Research Planning Meeting in Las Vegas, USA in June 2018.

This outlined the historical development of the registry from May 2013 and its key developments in assisting with clinical trial recruitment. An updated poster was presented in April 2019 at the 12th Annual Neuromuscular Translational Research Conference and is published in the Journal of Neuromuscular Diseases.

If you would like a copy of the updated poster please contact the registry curator.

REMINDER - If the registry is used to promote or assist with the recruitment for a clinical trial or research study all eligible patients will be contacted by the registry curator via email.
4. Registry update

The registry on average recruits 9 new participants per month with an average age of 48 years. As the amount of registrations continues to steadily increase, the registry continues to be a useful resource supporting academic and industry enquiries. This in turn can benefit the wider FSHD community by providing greater insights into the natural history of FSHD, the management and standard of care for FSHD and the effectiveness of potential new treatments being tested. Some registry updates have been provided below.

### Patient location

The patients on the UK FSHD registry are primarily located in the UK (82.7%), with a small proportion of patients from non-UK European countries (11.3%) and other continents.

### Patient reported wheelchair use

- None – 581 patients
- Part-time use - 168 patients
- Full-time use – 130 patients
- No answer – 44 patients

### Patient reported muscle weakness

- Periscapular (around the shoulder bone) – 805 patients
- Facial – 622 patients
- Hip girdle – 616 patients
- Foot dorsiflexor (muscles around the shin, ankle and foot) - 582 patients

### Patient diagnosis

Of the 923 patients in the UK FSHD Patient Registry:

- 328 have a diagnosis of FSHD (unspecified what type)
- 490 have FSHD1
- 28 have FSHD2
- 77 have an unknown diagnosis

### Patient genetic diagnosis

This information comes from the genetic reports that your registered professional should update on your registration once you have nominated one. Alternatively this information can be sent to the registry curator to update. Patient genetic diagnosis are as follows:

- Genetic confirmation of FSHD1 – 427 patients
- Genetic confirmation of FSHD2 – 18 patients
- No genetic information provided – 478 patients
5. Upcoming events and new initiatives

FSH Society are hosting their 26th Annual FSHD International Research Congress on 19/20th June in Marseille, France. For further information and to book online, please visit: https://www.fshsociety.org/news/2019irc/

Be sure to check out: https://www.musculardystrophyuk.org/events for upcoming fundraising, campaigning and care/support events.

Why should you join Share4Rare?

Share4Rare is a new digital platform that aims to address the needs of patients, families and researchers. The platform will provide accurate information about rare diseases and provide a safe space to interact and share information. For more information about the platform and why you should join, please visit: https://www.share4rare.org/news/10-reasons-join-share4rare

Thank you for reading this newsletter and being a part of the UK FSHD Patient Registry. In the coming months we will be re-consenting patients for the registry as the registry data is being securely transferred from Germany to the UK following the implementation of the EU General Data Protection Regulation (GDPR). The re-consent of registry participants is required to enable the change in location of stored data.

If you have any questions, feedback/suggestions or you would like to share your story, please contact ben.porter@newcastle.ac.uk

E-mail: fshdregistry@treat-nmd.eu

Telephone: 0191 241 8640

Post: John Walton Muscular Dystrophy Research Centre
Institute of Genetic Medicine
Newcastle University
International Centre for Life
Newcastle upon Tyne, NE1 3BZ