**FSM/AGM CJDSN Meeting**
**10th September 2022**
**St. Anne's College**
**Oxford**

**Present:** Annette Beal, Kate Dahill, Lisa Denton, Sean Horstead, Terri Hughes, John Centola, Richard Knight, Hatice Kurudzhu, Brian Marsden, Beth Marsh, Simon Mead, Tzehow Mok, Diane Ritchie, Anita Tipping [additional attendees names redacted] **(53)**

**Apologies:** Margaret Leitch, Andy Tomaso [additional apologies names redacted] **(5)**

## 1.0 Welcome

Prof. Knight welcomed everyone. The meeting is for the benefit of the attendees and for the families who have not been before. The aim of the meeting is peer sharing, peer support and families are encouraged to ask questions to any of the speakers/experts.

Prof. Knight also touched on the sad passing of Queen Elizabeth 2nd and informed the attendees that the committee members have agreed that the FSM/AGM should be held. A toast will be held this evening in honour to the late Queen.

This was briefly followed by the housekeeping, health and safety guidelines for everyone to adhere to and follow before the start of the day's proceedings.

Prof. Knight asked the committee members to introduce themselves to the attendees with a brief bio and how they got involved with the CJD Support Network (CJDSN).

## 2.0 Icebreaker

The aim of the icebreaker is to put the attendees feel at ease, meet and talk to members. This was led by Prof. Mead.

The attendees were grouped as per criteria that is given. Criteria like the members' geographical locations, CJD strains their loved ones has or had, their

timeline with the CJDSN. Each grouping was given enough time to meet and chat with fellow attendees.

**3.0 Overview of Prion Disease- Dr Hatice Kurudzhu**

Prion disease is progressive and it is a rare group of neuro degenerative disorders and CJD is a prion disease.

Proteins are the building blocks of cells that make up our organs. Proteins are made up of strings of amino acid, coded by DNA, constantly being broken down and folding.

Change in a gene code is a result in a change in the chain of amino acids. The result could be pathogenic mutation which is disease causing or polymorphism where minor change occurred but directly not disease causing. However, polymorphism may affect one's susceptibility to the disease.

Misfolded proteins do not have correct 3D structures and cannot function properly. They start building up in or around cells forging protein aggregations and becoming toxic to the cells.

CJD has a unique disease mechanism. PrPc is the normal protein. PrPsc is the misfolded protein. It is self-propagating and it is prone to aggregation which leads to rapid spread and rapid clinical degeneration.

Sporadic CJD is caused by the rapid aggregation of misfolded prion protein in the brain and progression of rapid neuronal loss. It is a rare type of dementia syndrome. It affects different parts of the brain and clinical presentation varies between patients.

Inherited Prion Diseases- It is an autosomal dominant inherited prion disease. This is due to faulty genes that lead to faulty proteins which are more likely to misfold. Genetic CJD, Gertsmann-Straussler-Scheinker (GSS), and Fatal Familial Insomnia (FFI) are all inherited prion disease.

Variant CJD was first reported in 1996. It is a transmitted infection from BSE in cattle to humans. Variant CJD could stay dormant for 10-20 years after trans-

mission. Younger onset has slower progression with longer duration. Behavioral and psychiatric symptoms are common.

Iatrogenic CJD is an acquired infection following exposure from cadaveric dura mater and pituitary glands, exposure from corneal transplants and contaminated neurosurgical instruments.

**3.1 Diagnosis of CJD based on international criteria**
Clinical sign
Progressive nature of the disease
MRI and EEG findings
RT-quick which detects the abnormal 14-3-3 protein if one has the disease
Exclusion of mimicking conditions i.e. encephalitis, metabolic diseases, lewey body dementia

**3.2 Brain MRI in CJD**
Highly specific findings
Cortical ribboning sign
Change in the basal ganglia

Managing the psychosocial and neuro-physical impact and stigma are significant issues with people with CJD and it is extremely important that these are addressed and get the support they need. CJD is a progressive prion disease with progressive cognitive decline.

Qs and As followed post presentation.

**4.0 Overview of Dr. Ritchie's Research**
Dr. Ritchie is this year's recipient of the CJDSN research grant.

Her research is about "Investigating the presence of abnormal prion protein in human pituitary derived growth hormone (hGH) implicated in the UK cases of iatrogenic CJD". Iatrogenic CJD relating to illness caused by medical examination or treatment.

Prion disease can be identified through their aetiology. Strains of human prion disease include genetic CJD, sporadic, iatrogenic, vCJD (acquired human prion disease transmitted from bovine to human).

Dr. Ritchie gave a brief overview of the human growth hormone. Growth hormone secreted by the pituitary gland targets bones and other tissues to promote growth and development on children.

Inefficiency of human growth hormone production in children leads to short stature with no adverse effect.

Clinical trial started in 1959. Increased extraction of hGH started in 1975. Approximately one million pituitary glands were collected.

Transmission of human prion disease was confirmed in 1968. 1st case of CJD was reported in 1970. 1st case of CJD in hGH recipients in the USA and the UK was reported in 1985

1.8+K patients received hGH between 1959-1985 in the UK. There had been 80 deaths reported from hGH treatment since 1985 to date. The Hartree-modified Wihelmii is most implicated hGH drug preparation.

**4.1 Aim of the study**

To detect abnormal prion protein in the hGH manufactured in the UK between 1959-1985.
Access to a unique cohort of patients.
Deepen understanding of the human growth hormone.
Provide additional information on specific batch and extraction protocols.
Refine current assessment of hGH.

To date although relatively small there are still cases of iatrogenic CJD. The "at risk" have no mechanism in situ to provide details or information.

Qs and As followed post presentation.

**5.0 Predicting onset of prion disease in at risk individuals – Dr. Mok**

Dr Mok's research involved gathering a big number of spinal fluid and blood samples, find out how many clients have positive RT Quick results and to optimize

the amplification of the amino acid in order to build a scientific connection to prion disease and to ascertain when symptoms are likely to manifest. His cohort of patients come in every year to support his research.

**Aims**
Develop a test to detect very small amount of prion.
Find proteins leaked by damaged brain cells.
Follow the changes overtime.

**Who are at risk?**
Individuals with inherited prion disease with confirmed mutation carriers and their untested blood relatives.
Recipients of hGH sourced from cadavers before 1985.
Recipients of contaminated blood transfusion with acquired prion diseases (iatrogenic, vCJD).

**Challenges**
To implement timing of treatment-early treatment stands a better chance of a good outcome.
To treat the disease at its early stage before the symptoms become apparent.
Identify biomarkers.

**Results**
7500 spinal/blood samples have been analyzed.
Seeding activity can be detected long before symptoms appear.
There is a raised level of proteins from the injured brain.
Prion seeds can be detected later but closer to the symptom onset.
Difference exists between fast and slow inherited prion disease.

**Promising treatment**
PRN100 is the humanized antibody version of ICM18 (mouse antibody). The antibody sticks to the normal prion and stops it binding to the prion seed and prevents it from joining the disease process.
Anti ?cell oligonucleotides.

Infectious prions are not toxic but after a time some changes will take place. It needs further exploration.

Qs and As followed post presentation.

**6.0 Treatment – Where are we now? Prof. Mead**

The concept of protein antibody treatment was developed 20+ years ago and PRN 100 was developed and manufactured.

PRN 100 is the humanized version of the mouse antibody designed specifically for the treatment of CJD patients.

Prof. Mead gave a brief background on how prions grow, how normal prion protein undergoes a change and becomes the abnormal protein. One needs to understand the disease and the strain is encoded on the prion.

The main strategy, is find a drug that sticks to the normal prion and to prevent it from binding to the prion seed.

Treatment is generally drug however prions evolve. There is no natural production of antibodies in patients with prion disease.

**Clinical approach**

The treatment plan was approved by the Hospital Oversight Committee.
To produce more drugs which amounts to millions to produce.
Special Needs License was sought for the 6 patients to use the drugs.
IV administration of 1mg, 10mg, 80mg/kg was given at 48-72 hours interval.

**Result**

PRN 100 did not cure the patients but at the same the patients have not been harmed. What is needed is a full-blown clinical trial. PRN 100 is not toxic.

IONOS pharmaceutical company is producing the drug. Its availability is still a long way off.

Qs and As followed post presentation.

**7.0 Chairman's Annual Report**

Prof. Knight gave a brief overview of the Network's achievements, activities and financial standing.

Beth Marsh the Network's new coordinator has settled in extremely well continuing the excellent work of Gill Turner, the previous coordinator and also developing and extending what we offer as a support.

After years of holding the Family Support Meeting/AGM in Birmingham, the Network had considered other venues to hold the FSM/AGM. Last year's event was held in Manchester, the first face to face meeting since the pandemic lockdown of 2020 and this year we are at St. Anne's College, Oxford. We will review this year's meeting and continue to consider the best arrangements for future meetings.

We have continued with digital meetings for the Management Committee however face to face meetings could be considered in due course if it is beneficial. The Committee has welcomed three new members Lisa Denton, Sean Horstead and Lizzie Hill. The Committee has a good balance of professional and family members with a range of useful skills.

Our digital communication is continuously developed through our website, e-mail, facebook and twitter accounts. Updated information and fact sheets will be in digital format only but can be downloaded and printed for those who need them. Our Newsletter is produced quarterly rather than annually and posted on our website.

A series of on-line peer-support groups for the North East, North West, Midlands, South East and the South West of England were attended with excellent feedback.

We have strengthened our previous connections and developed links with other organizations like the CJD International Support Alliance (CJDISA) and started to develop new ones like the Cure CJD Campaign and Genetic Alliance UK. Working with this wider network of organizations would help to increase our reach and raise awareness. We are also working and liasing with the nursing staff of the National Prion Clinic (NPC) and the National CJD Research and Surveillance Unit (NCJDRSU). Beth has met up with the Cure CJD Campaign coordinator and Beth

has arranged to attend the Prion 2022 Conference and will participate in a CJDISA Family Meeting at the conference.

The Network's finances are in a good state but donations and fundraising remain vital. We have approved and granted a number of care grants since the last report, supporting families where health and social care are unable to cover costs.

Again, we are in a position to fund research grants. One grant was awarded and the researcher was invited to the FSM/AGM in Oxford to briefly explain her intended work. A researcher who had received funding will present the results of his work at the same meeting. We plan to have further call for researchers at some point in the next few months.

**8.0 Financial Report 1st April 2022 to 9th September2022**

Fundraising was greatly reduced during the lockdown but has now picked up due to family members and friends of CJDSN are doing more fundraising events. The Network depends on donations and fundraising as our main income.

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| Income | £26,946.26 |
| Other Income | £669.00 |
| Total Income | £27,615.26 |
| Expenses | £17,590.90 |
| Net Profit | £10,024.36 |
| | |
| Current Account Balance | £5,980.07 |
| Reserve Account Balance | £200,027.87 |

**9.0 Election of Officers**

The incumbent committee members were duly elected en-block. The election of committee members was accepted and agreed by the attendees, proposed by Beth Marsh and seconded by Karen Cook.

Lisa Denton, Lizzie Hill and Sean Horstead were duly elected as co-opted committee members. Proposed by Bryan Hobson and seconded by Marie Dahill.

**10.0 Submitted Questions**

There is a dedicated box for questions the attendees would like to ask the speakers and the experts. Questions were posted through-out the day. Each question was read out and an expert/speaker/committee member answers the question. The submitted questions have been a success and has remained in the program for two consecutive years since its inception.

The following are just a few of the questions submitted.

Can a traumatized patient bring on CJD?
How much time do sCJD patients have from diagnosis to death?
Can antioxidant activity delay the onset of the disease?
How can we navigate the run of genetic CJD in the family?
Is it possible to consider covid-19 could accelerate or cause CJD?

**11.0 Round table sharing**

The attendees were asked to join a group of their choice. Each group is hosted by an expert/speaker supported by two committee members. The round table is designed to help the attendees to talk with ease, share experience and ask questions.

**12.0 Closing Remarks**

Prof Knight gave a summary of the day's event. Prof Knight requested that the feedback about today's event be completed and sent back to the CJDSN. Feedbacks whether positive or negative are vital. They help improve the service (if wanting) provided by the CJDSN and do some changes where it is needed.

Prof. Knight thanked everyone for attending and bid everyone a safe journey home.

The meeting finished at 1600hrs.