North East London Diabetes Research Network

DRN
Diabetes Research Network
North East London LRN

Newsletter

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Prof. R. D. G. Leslie's Pioneering work at BCMS

R.D.G. Leslie is Professor of Diabetes and Autoimmunity, Research Lead – Centre for Diabetes and Metabolic Medicine - at the Blizard Institute of Cell and Molecular Science (BICMS), Royal London Hospital and works closely with North East London Diabetes Research Network (DRN).

He specialises in autoimmune disease which affects 10% or more of the North American and European populations. In organ-specific autoimmune disease an organ is targeted by an aggressive immune response which can damage and eventually destroy the organ. Type 1 diabetes (T1DM), is one such organ specific autoimmune condition, and is due to destruction of the insulin secreting beta-cells in the islets of Langerhans situated in the pancreas. Whilst T1DM is typically found in childhood, where it is the second commonest chronic illness, autoimmune diabetes may also present in adults (adult-onset T1DM) and may not require insulin treatment, at least initially.

Since autoimmunity is some adults may be clinically latent or hidden, this form of diabetes has been classified as latent autoimmune diabetes of adults (LADA). A European consortium, Action LADA, is investigating this condition and there is a study site based at BICMS. Professor Leslie is also well known for his work on the factors which cause T1DM. Whilst genetic predispositions are known to play a role in T1DM, there is powerful evidence that environmental factors are also a significant factor which may trigger the condition, and this can be demonstrated in the discordant development of T1DM in identical twins. A cohort of diabetic twins has been followed at BICMS for several years and is the largest, longest running diabetic twin study in the world. They continue to give insight to the contribution of environmental factors which may trigger T1DM and this valuable work continues and is supported by the NELonDRN.

Development of efficient and safe intervention strategies for preserving and/or restoring insulin production in T1DM is also an exciting development supported by the network. It has been generally agreed that preventive studies performed very early in the disease course may be beneficial for future management of T1DM. BICMS is at the forefront of this important development: trialling a vaccine which hopefully will prevent beta cell destruction in newly diagnosed persons with T1DM. Such studies as these are heavily dependent on the support of patients and networks, including NELDRN to identify suitable subjects and support our efforts to cure this form of diabetes.

Student Nurse Sarah Girmay

Sarah had her rotation with the NELonDRN in the month of March. She is the third student nurse to be placed this year. Her induction included knowledge about diabetes, and the structure of the diabetes research network. She was also able to visit local primary care centres and witness work carried out by research nurses in the local community. Her positive evaluation of the time spent with the NELonDRN reflected her now increased knowledge of diabetes and how nurses also can contribute to the research process either by regarding research as a career or even becoming nurse researchers.

Study Portfolio update

Current studies

ADDRESS study:
(After **D**iagnosis **D**iabetes **Re**search **S**upport **S**ystem)

The ADDRESS study has been adopted by NELonDRN to establish a fast, reliable and accurate support system to facilitate future research into T1DM. This is mainly to be achieved through the set up of a confidential database system which will record individuals recently diagnosed with T1DM who have given consent for their details to be entered onto a national database.

Diamyd study:
A therapeutic vaccine study which has shown clinical trial efficacy in preserving beta cell function in patients between 10 -20 yrs old with type 1 diabetes within 12 weeks of diagnosis, has been commenced with NELonDRN support. Study co-ordinator Zohra has successfully recruited **4** patients for this study. Our site is the only site in UK recruiting patients to date.

Liraglutide and Insulin Trial:
A type 2 diabetes study researching the effects of a newer class of injectable medication called Glucagon-like peptide-1 (GLP-1), which have been previously shown to improve diabetic control and help with losing weight. The present study is being run to find out more about using liraglutide in combination with insulin and metformin. Study co-ordinator Jo Law has successfully screened her first patient for the study.

Bangladip study:
(Diabetes prevention in people from Bangladesh; a pilot trial in east London)
This pilot project is aimed at diabetes prevention in the Bangladeshi community in Tower Hamlets. In non-diabetic Bangladeshi participants we have tested the feasibility of key aspects of participant identification, recruitment using the Cambridge risk score (CRS), the screening process, interventions and measurement of outcomes. Over 500 patients participated in this local study and the investigator is extremely grateful to local agencies and GPs for assisting in this study.

Fish oil in Diabetic pregnancy:
The aim of this study is to see if taking supplements of omega-3 and omega-6 acids during pregnancy can improve the health of both mother and baby. Previous researchers suggests that if mothers are already diabetic, or develop diabetes during pregnancy, or have insufficient amounts of certain nutrients when pregnant, their child may have a higher risk of becoming overweight and is more likely to develop diabetes and high blood pressure in adulthood. We are aiming to recruiting 245 patients to determine whether taking fish oil supplements can reduce these risks.

Year of Care:
The Year of Care project is a partnership initiative between the Department of Health, Diabetes UK, the Health Foundation and the National Diabetes Support Team. Three local pilot National Health Service (NHS) areas are exploring the feasibility of the Year of Care and what needs to happen to make it a reality. The sites are Calderdale and Kirklees Primary Care Trusts NHS North of Tyne and Tower Hamlets Primary Care Trust. The Year of Care approach puts patients in the driving seat of their care and supports them to self-manage effectively.

Pathways to Emergency Care:
This study aims to understand the needs of people and their families at difficult times in their diabetes management which may require hospital admission, and seeks to elaborate on the reasons why people seek emergency help. Information gained from one-to-one interviews with patients and health professionals will assist in the understanding of patient needs and will be used to make recommendations to care providers and policy makers.

Epigenetic and Foetal Programming: Feature
This study is funded by the Medical Research Council, the Feature study will be recruiting pregnant women from the Antenatal department at the Royal London Hospital. We will look for epigenetic changes in blood (taken from the umbilical cord at delivery) from children who have been exposed to gestational diabetes or high homocysteine levels and compare this to a control group and their parents. We will then look to see if these epigenetic changes have any effect on how their genes work, their glucose and insulin levels and body fat. This will allow us to find out more about the causes of diabetes, how to predict who is going to get it, and ways of preventing it altogether. **Principal Investigator – Dr Sarah Finer, Chief Investigator – Prof. Graham Hitman**

Future studies

Vit. D study:
A study to investigate the effects of vitamin D supplementation on metabolic parameters in people at risk of type 2 diabetes.

DARE: Diabetes **A**lliance for **R**esearch in **E**ngland
This is a community-wide collaboration between patients and professionals to provide a research resource to enable further study into the causes and complications of diabetes. It will combine clinical, laboratory and genetic information to improve our understanding of both Type 1 and Type 2 diabetes and their associated complications.

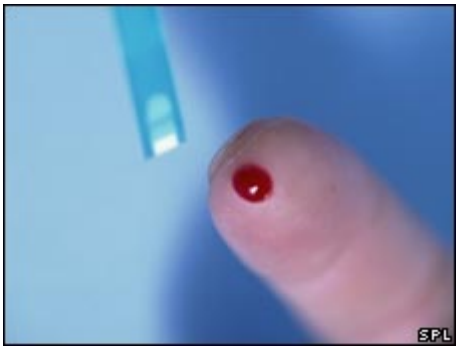
ASCEND: A Study of **C**ardiovascular **E**vents i**N D**iabetes
A study to demonstrate whether aspirin reduces the risk of cardiovascular events in individuals with diabetes who do not already have diagnosed occlusive arterial disease, and whether such benefits outweigh any potential hazards in taking such medication.

Local News

- **Malar Sarvanan**, one of our research nurses who was on maternity leave has now returned back to work full time on Action Lada and Ascend
- Our research nurse **Zhi-Xin Jiao (Jane)** got married in the month of May. From June she will divide her work hours between **EEDRN** (East England DRN) and **NELDRN** (North East London DRN)
- **Dr. Farah Barakat**, our research study doctor has completed her contract with the Clinical Research Centre and has joined this hospital as a neonatal trainer. We now have two new study doctors who are helping us with our studies, **Dr. Nikolaos Kamperidis** and **Dr. Ravi Menon**.

Do you know that?

Diabetes warning signs detected



Body chemistry changes that lead to type 2 diabetes begin several years before symptoms become apparent, research has shown. The researchers followed 6,538 UK civil servants over almost 10 years, during which 505 cases of type 2 diabetes were diagnosed. They examined how the volunteers' blood glucose levels and the capacity of their tissues to respond to insulin - known as insulin sensitivity - changed over time.

Source: Article date:08/06/09,retrieval date:09/06/09 from *Url:http://news.bbc.co.uk/1/hi/health/8085762.stm*

Steep rise in young needing insulin:

''DIABETES in very young children is soaring at an 'alarming' rate. There will be twice as many under-fives with Type 1 diabetes by 2020 than there were in 2005 if trends continue, research shows. And the number of sufferers up to the age of 15 is expected to rise nearly as quickly. Researchers said 24,400 new child cases are predicted in Europe in 2020, up from 15,000 new cases in 2005. Among the under fives, they would increase from 3,530 cases to about 7,140. The increase was too steep to be put down to genetic factors alone so it must be due to changes in our environment – including less exposure to germs and more Caesarean births, the researchers wrote in the Lancet. More children could go on to develop potentially fatal ketoacidosis, a common complications that raises acidity in the blood, warned expert Dr. Chris Patterson of Queen's University Belfast. Earlier research reported children born by Caesarean section have 20 percent higher risk of developing Type 1 diabetes than those born naturally. About 250, 000 people – including 20,000 children – have Type 1 diabetes, also referred to as insulin-dependent diabetes''. (Source: Article date: 28/05/09, retrieval date: 01/06/09 from Metro news paper.)

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