

ACB Northern Ireland Regional Spring Scientific Meeting Report

The day began with a warm welcome for all of the delegates and some opening comments from Mrs Margaret McDonnell, the outgoing ACB NI Chair, and Chair of the morning session.

The first speaker of the day was Professor Ian Young, ACB President elect and Chief Scientific Officer for Northern Ireland. Professor Young's thought provoking presentation, which used the ACB's strapline "*Better science, Better testing, Better care*" as a title, was an excellent keynote to the meeting. Professor Young focused the audience on the important role laboratory scientists will continue to have in an ever-evolving healthcare service. By using examples, both local and international, Professor Young reminded the audience that science and clinical medicine are the products of innovation and that as a profession, laboratory scientists must assertively lead such innovations. Delegates were encouraged to work co-operatively with clinical colleagues in leading change for patient's interests while being mindful of their duty to prevent the widening of an existing health inequality gap.

The second speaker, Dr Johnny Cash, a Consultant Hepatologist BHSCT presented his findings from a pilot study aimed at reducing unnecessary laboratory testing. The study, which was carried initially in the Hepatology wards of the Royal Victoria Hospital, was subsequently retested in a Hepatology ward in a different Hospital within the Trust. The study demonstrated that better utilization of laboratory tests was achieved after requesting clinicians were provided with helpful resources such as a blood projects toolkit signposting to the most appropriate panels of tests for common clinical scenarios. Dr Cash reported that the success of the pilot study, which observed a sustained reduction in unnecessary testing at both locations, has gained the interest of several other clinical areas. With continued engagement it is hoped that the resources developed as part of this study will be rolled out elsewhere.

The theme of best practice in laboratory testing was continued by the third speaker of the day, Dr Mark Lynch, consultant Clinical Scientist in Biochemistry, WHSCT. Dr Lynch's talk on reflex and reflective testing comprehensively discussed both the usefulness and potential adversity of such testing. Dr Lynch highlighted the lack of evidence supporting an often-assumed added value of reflex and reflective testing and emphasised the requirement for dedicated guidelines on such testing to ensure harmonious practice between laboratories.

Dr Marta Lapsley, Consultant Chemical Pathologist, Epsom and St Helier NHS Trust gave an excellent overview of kidney stone pathology, epidemiology and medical management. Amongst many gems of wisdom, Dr Lapsley explained the intricate inverse relationship between calcium intake and stone formation demonstrating the role of dietary calcium in reducing oxalate uptake. Dr Lapsley also discussed a continued change in stone prevalence, in particular the increases of uric acid containing stones, seen in diabetic and metabolic syndrome patients, emphasising

the importance of multidisciplinary teams in the medical management of patients with co-morbidities.

Professor Peter Maxwell, Consultant Nephrologist, BHSCT and Honorary Professor, Queens' University Belfast gave the final talk of the morning session. Prof. Maxwell, who had the unenvied task of holding the audience's attention prior to lunch, did so with ease giving delegates food for thought on all past, present and future lunch choices as he discussed the well documented phenomenon of metabolic memory as a result of poor glycaemic control. Prof. Maxwell's presentation which mainly focused on chronic kidney disease (CKD) enlightened delegates of the magnitude of contributing factors involved in the development of CKD including; environmental factors such as diet and smoking, genetic predisposition, CKD is highly inheritable and epigenetic contributions which is confounded by the fact that different tissues will express different epigenomes.

The afternoon session was jointly chaired by Dr Graham Lee, Chair of ACB ROI region and Dr Elinor Hanna, Consultant Chemical Pathologist, NHSCT. Dr Nigel Hart, GP and Senior Clinical Lecturer, QUB was the first speaker of the afternoon session and gave a very insightful presentation on quality improvement. Delegates were reminded of the value of inclusive organisational quality improvement, driven from the bottom up rather than enforced from the top down. Dr Hart's presentation also gave a window into how quality improvement models established in industry are easily adaptable for use in a healthcare setting.

The second Speaker of the afternoon session was Dr Hamish Courtney, BHSCT, with an excellent overview of transgender endocrinology. Dr Courtney, gave the audience an insight into gender dysphoria, the stages in gender transitioning and in particular his role as an Endocrinologist in the transitioning process. Dr Courtney explained that as with the rest of the UK, referrals for gender transitioning in Northern Ireland continue to increase on a yearly basis and that continued and increasing financial support will be required to support the cohesive multidisciplinary approach required to ensure the best provision for service users.

Dr Godfrey Gillett, Consultant Chemical Pathologist, Sheffield Teaching Hospital educated the audience on Wilson's disease, a rare autosomal recessive disorder. Dr Gillett explained that copper metabolism is normally a tightly regulated and conserved process which goes awry in patients with Wilson's disease due to a loss of function of the protein, copper-transporting ATPase 2. While the disease is characterised by a pathologic build-up of copper in organs such as the liver and brain, paradoxically reduced circulating levels of copper are a diagnostic marker of the disease. In addition to an excellent overview of the disease aetiology and medical management, Dr Gillett also highlighted some diagnostic anomalies to be aware of such as haemolytic anaemia which may incorrectly exclude a diagnosis due to normal copper levels and the importance of excluding nephrotic syndrome as a cause of low copper.

The final two talks of the afternoon session were complementary presentations focused on the topic of Drugs of Abuse. The first talk, presented by Dr Michael

Trimble, Clinical lecturer QUB and BHSCT, explained the magnitude and complexity of the problem giving an overview of the burgeoning range of Drugs of Abuse currently on the market. In his talk, Dr Trimble alluded to the difficulties faced in maintaining a satisfactory legal framework capable of dealing with the current exponential and evolving production of new psychoactive substances (NPS) and the continued misuse of prescription only medicines. The final speaker of the day Dr Jenny Hamilton, BHSCT, a Clinical Scientist specialising in Toxicology, continued on the theme of Drugs of Abuse, this time looking from a Toxicology laboratory perspective. Dr Hamilton described the modernisation process the Belfast Toxicology laboratory has underwent since its initial set-up in 1984 when it had an annual sample number of 400 to it's current format which analyses on average 10,000 samples annually. In her presentation, Dr Hamilton, also described the challenges currently faced by all Toxicology laboratories, which are continuously required to modify and develop their assays to ensure the provision of a testing repertoire that reflects the evolving drug use climate.

The meeting was brought to a close by Mrs Margaret McDonnell, who thanked all of the speakers and delegates in attendance.