

MEETING REVIEWS



Suzanne Hall



Dr Heidi Doughty

The SHOT team

Symposium SnapSHOTS 2014

SHOT, Serious Hazards of Transfusion, is the UK haemovigilance organisation. It is affiliated to The Royal College of Pathologists but has a steering committee representing at least 20 professional healthcare bodies.

It is a truly multi-disciplinary transfusion community, which feels passionately about patient-centred care. This symposium launched the 2013 Annual Report, which provides direction for UK transfusion policy and practice.

Context is key

The symposium started with Dr Kate Ryan, a haematology consultant from Manchester, interviewing her patient, Julie, who has sickle cell disease. Julie described the personal and professional impact of painful sickle crises and how the introduction of automated exchange transfusions has significantly improved her quality of life. This session highlighted the contribution of blood transfusion to saving and improving lives. Context is key. Dr Paula Bolton-Maggs, Medical Director of SHOT, introduced the 2013 SHOT Report. Blood transfusion in the UK remains safe with 12.9 event reports per 10,000 blood components issued. However, there continue to be adverse incidents and most of these (77.6%) are due to human error and are therefore potentially avoidable. In several incidents, multiple errors contributed.

Process design

The potentially complex nature of the transfusion process and impact on patient care were exemplified by the next presentation. Dr Jane Keidan explored the issues around the continuing sensitization of women to D antigen. Potential areas for improvements were weight-dependent dosing and simplification of regimes. Event analysis by specialty was introduced in 2012. There continues to be a large number of 'specific requirements not

met' in haematology. Risks can be reduced overall by appropriate use. The problems were well illustrated in the 'Audit of platelet transfusion practice', presented by Dr Chris MacCauley from Belfast. Decision-making tools at the point of prescribing may reduce errors and improve prescribing. An excellent example of this was the poster describing the implementation of a mandatory weight box on an electronic transfusion order. Using weight to prescribe blood together with fluid charts should reduce the risk of transfusion-associated circulatory overload (TACO).

The human factor

Process design and human factors were key messages. Guy Hirst is a retired British Airways training standards captain and pioneer of human factors training. His keynote lecture focused on the lessons that medicine can learn from the airline industry – not technical lessons, but ones of applied psychology. Mistakes may occur when we are on 'automatic pilot' in a 'high-risk situation'. 'High risk' includes interruptions, deviations, unanticipated events and interweaving unrelated tasks, i.e. the daily life of most healthcare professionals. In a short video, Kathryn Schulz recounted a discussion with Ed Viesturs, an experienced mountaineer, who chillingly states that "a mistake is a mistake, whether you pay for it or not". The message underlined the need for reporting and learning from near misses.

Computers as team players

After lunch, the focus shifted from man to machine. Karl Mosen, a PhD student from Edinburgh, presented his work on the evaluation of a computer app supporting transfusion prescribing. He underlined the challenge of keeping such programmes continually updated. The presentation provided the perfect introduction for Professor Harold Thimbleby's keynote lecture. As a computer scientist with an interest in medical devices, he provided an unusual insight into our approach to 'user error' as he explored the theme of 'Computers as team players?'. 'Mistakes' using computers and electronic devices are often due to the poor design of these devices. He called for 'user-centred design' and more rigorous clinical testing of devices. Patients are also part of 'the team'. Simon Goodwin,



a transfusion practitioner, presented a patient consent tool. Informed consent for sick patients requiring urgent treatment is challenging, but a well-designed consent tool may improve patient satisfaction while reducing errors.

Conclusions

The last session of the day was an interactive session where selected cases from the 2013 Annual Report were expertly presented for audience discussion. The success of SHOT relies on the participation of not just the transfusion team but also the wider healthcare community. It is the honest sharing and learning from our practice collated by SHOT that provides the potential for continued excellence in transfusion safety.

The full report and support material can be downloaded from www.shot.uk.org

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Suzanne has an interest in transfusion and was awarded a bursary to attend the annual SHOT Symposium at Salford Quays in Manchester on 9 July 2014.

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Laura Russell

A summer of sport

Report from the ACB Scotland Region and Royal College of Pathologists' Joint Scientific Meeting

This summer promised a veritable feast of sporting activity for all, with the World Cup Finals, Wimbledon, rugby, golf and cricket championships to be contested and, for Scotland, the added excitement of hosting the Commonwealth Games. Thus, it was unsurprising that the collective mindset turned towards sport and this unique meeting was fashioned.

Scotland's national stadium, Hampden Park, provided an apt setting for exploration of weight-loss strategy in hard-to-reach populations and the interaction between genetics and environment in predisposition to obesity. Later presentations focussed on the elite athlete and the importance of

nutrition to maximise performance, the role of the laboratory in detection of the use of illicit substances and finally, the practical aspects of preparing the environment to maximise the potential of Team Scotland during major championships.

Professor Kate Hunt (MRC/University of Glasgow) kicked off proceedings with an overview of the success of the Football Fans in Training (FFIT) programme in engaging and motivating men to lose weight via a three-month lifestyle intervention and education programme. The FFIT programme, which recruited overweight and obese men to a weekly training and education session hosted at Scottish Premier League football clubs, gave impressive commitment from participants and significant weight loss. The benefit in terms of weight, waist circumference, blood pressure and healthier eating remained at one year, clearly demonstrating the long-term benefits of the FFIT programme.

Dr Jason Gill of the University of Glasgow then provided an excellent presentation on the influence of activity rates on health and showed results from a variety of studies of obesity within different ethnic populations. He demonstrated evidence that one size does not fit all and criteria for classification and treatment of diabetes and obesity may need to be further refined in order to account for the influence of ethnic origin on cardiovascular risk and outcomes.

With the approach of half-time, attention switched to performance nutrition as Declan Fields (NHS Tayside) explained his role in aiding maximising athletic performance. Mr Fields em-



phased that a healthy varied diet integrated into the athlete's training schedule is usually sufficient to support optimal performance and recovery without the need for expensive supplements. This was a particularly novel insight for armchair fans in the audience such as myself, highlighting the barriers to nutritional management including timing around training and competition schedules, appetite suppression due to post-training fatigue and the financial strain associated with consuming high-quality foods.

Following fortification and a tour of the Hampden museum, the role of the WADA-accredited laboratory in drug testing for elite athletes was described by Professor David Cowan (King's College, London), who has been instrumental in the organisation and management of drug testing for the 2012 Olympics and 2014 Commonwealth Games. Professor Cowan described the difficulties of detection of a broad range of drugs, particularly anabolic compounds and designer drugs, and the

analytical advances employed in order to ensure maximal sensitivity and deterrence. This fascinating topic and the pioneering modifications of routine methods employed to accurately detect exogenous administration of banned substances held the audience enthralled.

The final presentation of this excellent meeting came from the Head of Sports Medicine at the Sport Scotland Institute, Dr Brian Walker. He discussed the experience of the Delhi Commonwealth Games and how lessons learned there have been used to prepare facilities and ensure a successful Games in Glasgow. Dr Walker also discussed the Institute's role in supporting Scotland's athletes with individually tailored programmes and health screening, and reinforced the enthusiasm and optimism for the fast-approaching summer of sport.

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Dr Tim Lang

International Congress of Pediatric Laboratory Medicine conference report

It is an exciting time in neonatology and paediatric laboratory medicine as new developments are beginning to provide new insights into the life of a child, from conception to maturation into an adult. The XIIIth International Congress of Pediatric Laboratory Medicine (ICPLM) held in June in Istanbul, Turkey, provided a unique opportunity to discuss these advances and continue a tradition started in 1980, in which specialists in the field gather to exchange ideas. This triennial meeting focuses on improving di-

agnosis and management of patients from birth to adolescence – the motto of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) taskforce on paediatric laboratory medicine.

The congress was held at the Istanbul Congress Center, which looked down on this ancient city spreading over two continents, Asia and Europe, separated by a narrow strait, the Bosphorus. This meeting of continents and cultures represented the spirit of the meeting, with participants attending from every corner of the world from as far as Argentina, Canada, Australia, Singapore, China, South Africa and the Middle East.

The congress was opened on Friday night by Professor Vijay Grey, Chair of the IFCC Taskforce, who then invited Dr Bekir Keskinkiliç, Deputy General Director of the Turkish Ministry of Health, to deliver the first plenary lecture. Dr Keskinkiliç described the recent developments of Turkey's neonatal screening programme and its future plans. Afterwards the delegates gathered outside for the welcome reception.

The main activities began on Saturday with six symposia covering neonatal screening, neonates and nutrition in the morning, and endocrinology, immunology and paediatric cancers in the afternoon. The day's plenary was delivered by a distinguished member of the College, Professor Michael Bennett from Philadelphia, USA,



though originally from Doncaster, UK. Following on from the opening lecture, he discussed neonatal screening and highlighted the diversity of conditions screened for across the individual states of America, following the advent of tandem mass spectrometry which allowed more conditions to be identified using same single blood spot. Professor Bennett highlighted the need for good outcome data to support a condition's introduction into a neonatal screening programme, such as that for medium chain acyl-CoA dehydrogenase deficiency (MCAD).

Another important theme of the Congress was highlighted by the endocrine symposium and second plenary speaker, Professor Wieland Kiess from Leipzig, Germany, which was the increasing prevalence of obesity, diabetes and cardiovascular disease presenting outside adulthood and the consequence of this earlier onset in relation to the metabolic syndrome. The symposium began with my own talk on recent advancements in neonatal hypoglycaemia. Professor Valerio Nobili from Rome, Italy, then highlighted the alarming rise in non-alcohol fatty acid liver disease (NAFLD) in the paediatric population as a consequence of increasing rates of obesity and overweight. Of real concern was the more rapid progression of the disease from NAFLD to irreversible end-stage disease in this specific population, which could be as short as 10–20 years, rather than three or more decades in adults. In some cases, the progression from F1–F2 (Fibrosis staging) to F3–F4 occurred within three years. Professor Sonia Caprio, from Yale, USA, continued the obesity theme, addressing

the growing challenge of type 2 diabetes in obese adolescents. The final lecture in this symposium was delivered by Professor Olli Raitakari, from Turku, Finland, who is coordinating two of the largest Finnish studies into cardiovascular risk including the Young Finns Study and the STRIP Study. These large-scale studies are providing exciting data on the relationship between childhood risk exposure and adult cardio-metabolic outcomes. For example, pooled data from several cohort studies has shown 65% of obese/overweight children became obese adults, compared to 15% of normal weight children. It was noted that childhood obesity was also a strong risk factor for type 2 diabetes, hypertension and dyslipidaemia. The challenge for the laboratory is to support the clinicians in identifying and managing these younger patients so that their prognosis is improved.

The final day's symposia focused on a wide variety of topics including paediatric reference ranges, paediatric laboratory tests, a discussion on critical values, education and oral communications. During the reference range symposium, updates were provided from the Canadian CALIPER project, the Swedish experience and the German KiGGs survey, prompting extensive discussion. One of the most popular sessions was the panel discussion on critical values. With the wide representation of countries, it was a real opportunity to discuss and share alternative practices from around the globe and in some cases identify best practice. The closing plenary was delivered by another eminent Fellow, Professor Jocelyn Hicks, Washington DC, who discussed the role of the paediatric laboratory in developing countries and how laboratories can be supported to develop and deliver the best service possible.

Most delegates will agree that they are excited at the prospect of what the next Congress will deliver. I definitely recommend any general or paediatric biochemists to accept the invitation to join the Congress when it is next held in 2017 in Durban, South Africa.

I would like to thank the Conference Organising Committee and particularly Professors Vijay Grey, Feyza Darendeliler and DMIT TĐrkoĐlu, the Congress Presidents, for putting together an excellent programme. Finally, the Organising Committee thanks the College for its support, which was gratefully received.

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