

The 2004 ADIPS Annual Scientific Meeting

The 2004 Annual Scientific Meeting was held at Darling Harbour, near the metropolitan heart of Sydney. This gave the opportunity for those who were “conferenced out” (ADIPS was preceded by the ASRB, ESA and ADS meetings) an opportunity to visit the city for a bit of shopping or sight-seeing around the Sydney foreshore in between sessions. Despite the distractions, there were over 100 registrants and the sessions were very well attended.

This year the major theme of the meeting was pregestational diabetes (ie Type 1 and Type 2 diabetes in pregnancy), but not exclusively so, as gestational diabetes is always also a hot topic at our meetings. We were privileged to have as our invited speakers, Prof Moshe Hod, from the Rabin Medical Centre at Tel Aviv University, Israel, and Dr Chris Nolan, who is currently at L’Universite de Montreal, Canada, but was able to return for a brief sojourn to Australia.

The meeting started with a double session on pregestational diabetes. Prof Moshe Hod gave the Novo-Nordisk ADIPS lecture, asking the question “Pregnancy outcome of diabetic women 15 years after the St. Vincent’s Declaration: achievement or failure?” He took us through the history of the management of diabetes in pregnancy, from the beginning of the 20th century when pregnancy was considered incompatible with diabetes, with high maternal mortality and fetal loss, to the impact of the discovery of insulin, and the improvements in obstetric care in the middle of the 20th century. By the 1970s, there was great optimism amongst the leading members of the medical fraternity interested in diabetes in pregnancy, hence the St Vincent’s Declaration was made in 1979. This had set the goal of achieving outcomes of pregnancy for women with pregestational diabetes approximating those of non-diabetic women within 5 years. Unfortunately 15 years later, it does not appear that these goals have been met. Moshe Hod presented data from different centres that the frequency of congenital malformations, fetal loss and other perinatal complications remain unacceptably high. He highlighted the need for preconception planning and to achieve a normal level of HbA1c if possible. A/Prof Aidan McElduff then presented the collective experience of a number of Australian centres for the last year. Lack of preconception planning, low use of folate, and inadequate glycaemic control were problems that he highlighted. There is now also a high proportion of women with type 2 diabetes in pregnancy. This session finished with a show of hands from the audience regarding what they felt was an appropriate preconception HbA1c target, taking into consideration the risks as well as the benefits of tight control. Opinion was divided with about half the audience indicating that an HbA1c target of <7% is appropriate, and the other half of the view that the target should be set lower.

After afternoon tea, it was time to get into the abstracts with the Roche Session. Jacki Catteau presented the background to the TRIGR Trial, which aims to determine if the use of casein hydrolysate formula instead of cow’s milk will reduce the development of diabetes in infants at genetic risk. Judy Davis presented the experience of completion of post-partum GTTs following

GDM at 2 centres around Newcastle, NSW. Wendy Cutchie reviewed international guidelines for the management of pregnant women with diabetes as part of her effort to determine a 'best practice model'. Ben Kroon examined risk factors which predicted the need for emergency caesarian section at National Women's Hospital, Auckland, and DS Gupta reviewed the effect of varying the criteria for diagnosis of GDM in an Indian population.

The scientific component of the first day of the meeting finished with Prof Moshe Hod presenting clinical and experimental data on the development of diabetic embryopathy and fetal programming. Much of this work was pioneered by Norby Freinkel and his group in Chicago which has spawned many of the leading researchers in this area today, including Moshe Hod himself. Freinkel's hypothesis of 'fuel mediated teratogenesis' was outlined. Once again, Prof Hod emphasised the need for tight glycaemic control and folate supplementation to minimise the risk of diabetic embryopathy.

The day finished with the Conference Dinner, held at Marigold Restaurant. This was in Chinatown, a short walk from the Convention Centre. The hungry ADIPS members were able to relax and catch up with each other, as well as chat with the invited guest speakers, whilst enjoying a seafood Chinese banquet which included tasty delicacies such as lobster in ginger and shallot, and vermicelli with scallops in the shell.

The Saturday of the meeting began with Prof Moshe Hod's third plenary, where he related some of the clinical advances in the management of diabetes in pregnancy. Novo-Nordisk is supporting a European trial of Insulin-aspart in pregnancy, which has just completed recruitment. Moshe Hod's experience with Insulin-aspart has been quite positive, and so far, it appears to be as safe as human insulin, though the full results of the trial are obviously not yet available. He also related his experience with the continuous glucose monitoring system in pregnant women. This has enabled him to characterise the glucose profile in obese and non-obese pregnant non-diabetic subjects. Finally, Prof Hod described the home fetal heart rate monitoring system, which he has been trialing in the management of high risk pregnancies. Women are able to monitor their fetal heart rate at home, and then transmit the data to the hospital for interpretation. Moshe Hod believed that when used in appropriate women, the home fetal heart rate monitor saves time, unnecessary hospitalisation and cost.

The second morning session comprised 6 oral sessions. Wah Cheung, presenting on behalf of Mark McLean, used data based on the family histories of 5769 women with gestational diabetes to support a programming effect of in-utero hyperglycaemia for the transmission of a diabetes phenotype from mother to child. R Myszka examined the need for insulin therapy, neonatal complications, baby size and early postpartum glucose intolerance amongst 491 women with GDM divided into 4 groups according to their diagnostic blood glucose levels. Harry Georgiou, on behalf of M Coughlan, then presented the only basic science abstract of the meeting with a sterling effort that even the many clinical members of the audience were able to understand! They made the somewhat surprising finding that placentae from

women with GDM displayed a reduced capacity to respond to oxidative stress. Louise Pirc measured cord blood insulin, adiponectin and leptin in neonates whose mothers were participants in the ACHOIS Study, finding an increased 'insulin antagonistic' cytokine profile in the IGT neonate. Katharina Zehle outlined the findings of a survey of 244 women with previous GDM conducted in Western Sydney which found that many women are not meeting dietary guidelines, concluding that more needs to be done to promote healthy diet post-partum. Lastly, H Margetts found 7 of 33 pregnant women with Type 1 diabetes had antibodies for coeliac disease. She suggested that such screening should be conducted routinely in this population, an issue which generated considerable debate amongst the audience.

Keeping to the ADIPS adage that good food is important for a good meeting, everybody sat down to a delightful hot lunch in the bright and airy atmosphere of the Skyline Terrace. Whilst some members were able to enjoy an extended lunch, other members trooped into the AGM, where it was announced that David McIntyre and Annette Parry were continuing on as President and Secretary respectively. Wah Cheung has taken over the task of treasurer from Janet Lagstrom, who was given a generous round of applause in appreciation of her work in recent years.

In the afternoon, the Lilly Oral Session saw 3 abstracts presented. David Simmons used data from the AusDIAB and Crossroads Undiagnosed Disease Study to demonstrate that screening for GDM has become more prevalent over time, but the proportion of those screened who developed GDM and subsequent diabetes has remained similar. Sue-Mei Lau then presented the experience from Westmead Hospital that the prevalence of Type 2 diabetes is rapidly increasing and that the lack of preconception planning is a particular problem amongst this group. Helen Murphy, who travelled across the world from the UK to attend the meeting, presented preliminary data from a RCT of the continuous glucose monitoring system in pregnancy, which suggests that CGMS might be an effective tool for improving clinical decision making in diabetic pregnancy. The Oral session was followed by a discussion of the role of insulin dextrose therapy at the time of delivery, led by Glynis Ross and Aidan McElduff. This was designed to elicit debate and comments from the audience, and was so successful that Aidan did not get past the first case history! The great interest generated leads us to think that you will be hearing more about this issue....

The final plenary of the meeting was given by Dr Chris Nolan. He reminded us all that there are marked alterations in lipid metabolism during pregnancy, and that GDM and Type 2 diabetes in pregnancy are not just disorders of glucose metabolism; altered fatty acid metabolism is also important. There is the potential for combined gluco-lipotoxicity to have adverse effects on both maternal and fetal islets, and affect the development of congenital anomalies. The final session of the meeting was to give an update of the National Diabetes in Pregnancy Audit Program. David Simmons advised the membership where we are up to with this. It has been a long road, and we know you will definitely hear more about this!

The meeting closed with David McIntyre thanking the local organising committee which comprised Wah Cheung, Gillian Harris, Sue-Mei Lau, Aidan McElduff, Glynis Ross and David Roxburgh. The meeting was generously supported by the principal sponsor Novo-Nordisk, as well as Eli-Lilly, Roche, and Abbott. The ADIPS Graz Clock Prize for the best scientific presentation this year ended in a dead heat, with the award being shared by Louise Pirc, for her presentation on the neonatal adipo-insular axis in IGT in pregnancy, and the team of Mark McLean/Wah Cheung for their presentation on the possible in-utero programming effect of hyperglycaemia.

And so ended another ADIPS Scientific Meeting, held in a congenial atmosphere, but hopefully with presentations that will produce further debate, policy and guidelines, as well as interest in research into the field of diabetes in pregnancy. Till we meet again at the 2005 ASM, to be held in the Northern Territory!

Wah Cheung