Some simple strategies have enhanced the care of Waikato women who have had gestational diabetes mellitus.

By Jessie George

Gestational diabetes mellitus (GDM) is defined as “any degree of glucose intolerance which first manifests itself in pregnancy and [it] occurs in two to 12 percent of pregnancies and appears to be increasing.”

Women with a history of GDM are at high risk of developing type 2 diabetes, as well as features of metabolic syndrome such as hypertension, dyslipidemia and microalbuminuria. All these increase their risk for cardiovascular problems.

Women with a history of GDM should be enrolled in follow-up programmes designed to ensure continuous surveillance, with the aim of providing effective prevention of type 2 diabetes and cardiovascular diseases.

The American Diabetic Association (ADA) and the Australian Diabetes in Pregnancy Society (ADIPS) recommend that all women who have had GDM in a previous pregnancy be tested for diabetes with a 75gm oral glucose tolerance test (OGTT), six to eight weeks after delivery of subsequent children. The test should be repeated every one to two years on those women with normal glucose tolerance and the potential for further pregnancies. Testing should also be done more frequently, depending on circumstances such as ethnicity, high body mass index before and after pregnancy, and multiparity. Additional risk factors include women with hypertension, previous delivery of a baby over nine pounds, previous diagnosis of GDM and cholesterol abnormalities.

Current policy at the Waikato Regional Diabetes Clinic is that all women with GDM should be under the care of the diabetes in pregnancy team until delivery. Antenatally, women are advised by a diabetes educator and a dietitian on the importance of healthy eating and physical exercise. Before discharge post-natally, patients are reminded again and encouraged to start or continue these lifestyle changes. A six weeks post-natal OGTT, a HbA1c (a test of average blood sugar levels over previous three months) and a lipids test are also strongly recommended.

Up until 2007, the clinic managed to follow up most GDM patients post-natally, with a 70 percent success rate in motivating them to carry out their post-natal OGTT. Unfortunately, this level of follow-up was not sustainable. Since then, patients have been discharged to GP care after delivery.

The Australian National GDM Technical Working Party recommends the “management of diabetes in pregnancy should be integrated with the woman’s primary health care team. This is essential to provide follow-up, eg annual/biannual OGTTs for women with past GDM and they may be involved in initiation and community-based aspects of management of GDM.”

A discharge letter from the diabetes nurse educator is sent out to the GP, as well as to the lead maternity carer, with suggestions about future management.

I have been the registered nurse at Waikato DHB’s diabetes in pregnancy clinic since 2008. In that time, I have noted that women presenting with subsequent pregnancies had recurring GDM or, in some cases, overt type 2 diabetes. I also noted they had not had sufficient post-natal follow-up (eg the six-week OGTT) of their GDM in their earlier pregnancy.

I decided to explore this issue further, firstly through telephone conversations with practice nurses. Most had little understanding of the importance of post-natal management of GDM and the serious consequences a lack of follow-up care could have on patients in the long run, ie development of type 2 diabetes. This lack of understanding was the main contributing factor to the inadequate follow-up of women with GDM. Other contributing factors included:

• Practice nurses were often unable to identify women who had had GDM.
• Often, copies of the discharge letters to GPs, outlining the importance of proper post-natal care, bypassed the practice nurses.
• GDM didn’t fit into their criteria for follow-up, despite a high risk for chronic diseases.
• A lack of an efficient recall system in the MEDTEC database for high-risk patients.

However, it is equally important to note that, in addition to practice nurses’ lack of awareness, patients themselves were not prioritising their own care.

Barriers for women

Secondly, I carried out a series of courtesy calls on women before their six-weeks post-natal OGTT. From these visits, I identified several barriers to women having the test. These included lack of motivation and the need for constant encouragement to complete the OGTT. This was due to doubts regarding its necessity, as well as insufficient knowledge about potential implications of a lack of follow-up care. Some clients lost their laboratory form and others did not have child care for the time of their OGTT appointment.

In light of these barriers, I reviewed the programme for the post-natal care of women with GDM and established a pilot programme aimed at removing these barriers. The pilot programme aimed to:

• increase practice nurses’ awareness of the importance of post-natal follow-up of women with GDM;
• increase uptake of the six-week postnatal OGTT; and
• establish an ongoing system to enrol high-risk women with GDM for an annual OGTT.

A range of strategies was implemented as
part of the programme. A sticker stating My mum had GDM (see illustration) was developed and the diabetes nurse attached it to the vaccinations’ record page in the baby’s Well Child book, thus alerting the practice nurse. The visit to the practice nurse for immunisations when the baby is six weeks provides an opportunity for the practice nurse, who has identified the mother had GDM through the sticker, to clarify whether the mother has completed her OGTT. If a mother has not undergone the test, the practice nurse can identify anything which may be hindering the mother taking the test. If the mother has lost her laboratory form, an additional form can be re-issued at this visit.

Another strategy was talking on the phone with the relevant practice nurse, providing them with a detailed account of the patient’s antenatal history and suggestions for post-natal follow-ups.

A separate copy of the discharge letter is now sent to the practice nurse so, along with the GP, they are aware of the patient’s follow-up requirements and any future risk of developing type 2 diabetes. Practice nurses can then enter the patient’s name into the annual recall registry in their MEDTEC database.

An audit of the pilot programme was conducted in December 2009, approximately six months after the new discharge process was implemented. Of the 77 patients who completed an OGTT after the pilot was implemented, three percent were diagnosed with type 2 diabetes, 10 percent with impaired glucose tolerance (IGT) and three percent with impaired fasting glucose (IFG). (See Figure 1.)

Crucial findings

These are crucial findings, as women with un-treated IGT or IFG are at greatest risk of rapidly developing type 2 diabetes. Had the audit not been conducted, the percentage of women developing type 2 diabetes would undoubtedly have been higher than three percent. Additionally, I identified that of the three percent of patients diagnosed with type 2 diabetes, one patient had completed their OGTT purely due to the encouragement of their practice nurse. Other significant results of this study included at least 10 percent of practice nurses adopting the proposed follow-up guidelines and the establishment of an annual recall system in the MEDTEC database.

But one year on, there has been a 68 percent increase in the number of practice nurses following the new initiative. In addition to the Well Child book marker strategy, I also conducted visits to general practices in the Waikato region, attended practice nurses’ clinical meetings, and presented education sessions on the post-natal management of GDM. I also kept in direct contact with the practice managers of most clinics, who then designated particular practice nurses to be in charge of their GDM clients. This was a highly efficient strategy, as I could simply dispatch the discharge letters to these practice nurses and they would then assume responsibility for further management of the women.

Currently, community health workers, including Maori health providers and Kaute Pacifica, are actively involved in the multidisciplinary team to mediate long-term management of high-risk patients. There has been a marked increase in the OGTT uptake. However, this is yet to be confirmed by an audit.

My next step is to improve the participation of Plunket nurses in the multidisciplinary team. I intend to hold meetings to establish and maintain relationships, and to provide education sessions on the importance of post-natal management of GDM.

Conclusion

Gestational diabetes is associated with maternal and perinatal complications and there is also a high risk of the both mother and baby developing type 2 diabetes. There has been a long established need for efficient strategies to increase OGTT uptake and enhance practice nurses’ and patients’ motivation to properly manage GDM.

I initiated a new GDM management plan, which focused on increasing practice nurses’ awareness of and responsibility for GDM management; increasing recognition of the need for post-natal OGTTs to reduce the future incidence of type 2 diabetes; and enhancing involvement of prospective mediators, such as Maori health providers. Although the process was time consuming and required a co-ordinated effort from a large multidisciplinary team, continuation of these strategies can bring about quite remarkable long-term changes, especially in the number of patients likely to develop type 2 diabetes in the future.

This article was reviewed by Kai Tiaki Nursing New Zealand’s practice article review committee in November last year.

Jessie George, RN, BN, is a clinical nurse specialist – diabetes with the Waikato District Health Board’s regional diabetes service. A poster presentation on the work outlined in this article won her first equal in the Best Poster Presentation award at the New Zealand Society for the Study of Diabetes conference in April last year. She also won the Australian Diabetes in Pregnancy Society Allied Health Presentation Award at the society’s annual scientific meeting in Sydney last September.