



Postpartum care of women with gestational diabetes: survey of healthcare professionals



Gerish Rayanagoudar^{a,c,*}, Misha Moore^c, Javier Zamora^{a,b}, Philippa Hanson^c, Mohammed S.B. Huda^c, Graham A. Hitman^{a,c}, Shakila Thangaratnam^{a,c,d}

^a Women's Health Research Unit, Blizard Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, London, UK

^b Clinical Biostatistics Unit, Hospital Ramon y Cajal (IRYCIS) and CIBER Epidemiologia y Salud Publica, Madrid, Spain

^c Barts Health NHS Trust, London, UK

^d Multidisciplinary Evidence Synthesis Hub (mEsh), Blizard Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, London, UK

ARTICLE INFO

Article history:

Received 8 June 2015

Received in revised form 27 August 2015

Accepted 17 September 2015

Keywords:

Gestational diabetes

Type 2 diabetes

Postpartum screening

Healthcare professionals

Survey

ABSTRACT

Objective: To assess the knowledge and practices of healthcare professionals on the postpartum care of women with gestational diabetes.

Study design: We surveyed 106 healthcare professionals including obstetricians, diabetologists, general practitioners and midwives in East London and West Midlands in England (September 2014). The questionnaire assessed postpartum screening practices, care provision, future risk and strategies to prevent diabetes in women with gestational diabetes.

Results: The response rate was 87% (92/106). Nearly all respondents offered advice on diet (99%; CI 95%, 100%) and exercise (92%; CI 85%, 97%) postnatally in women with diagnosis of gestational diabetes. The preferred screening time for diabetes was 6 weeks to 3 months postpartum (76%; CI 66%, 85%). Overall, oral glucose tolerance test was the preferred test (57%; CI 46%, 67%), although general practitioners preferred fasting glucose (50%; CI 33%, 67%) and glycated hemoglobin (47%; CI 30%, 64%). Most midwives (81%, 17/21) and obstetricians (52%, 11/21) either underestimated or were unsure of the future risk of diabetes. There was lack of consensus on responsibility for immediate postpartum screening.

Conclusion: The survey highlights the need for improved awareness of future risk of diabetes in women with gestational diabetes, consensus on optimal postpartum screening and identification of the main healthcare provider responsible for further management. This is particularly important for areas of social deprivation.

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Introduction

Gestational diabetes is glucose intolerance that first develops or is first identified in pregnancy [1]. Women with gestational diabetes are at higher risk of developing subsequent type 2 diabetes compared to women with normoglycemic pregnancy [2], resulting in significant morbidity and mortality and healthcare costs [3]. With increasing rates of obesity, sedentary lifestyle and unhealthy diet, the prevalence of gestational diabetes is increasing worldwide, with rates as high as 30% [1].

Current national and international guidelines recommend regular screening for type 2 diabetes after delivery in women with gestational diabetes [4,5]. Early identification of diabetes or impaired glucose tolerance in these women can prevent the associated complications. However, the rates of post-partum testing have been very low. In England, less than one in five women with gestational diabetes are followed up within 6 months of delivery with the annual follow-up rate also being around 20% [6].

Women with gestational diabetes are followed up after delivery by multiple healthcare providers such as obstetricians, diabetologists, midwives and general practitioners. These providers have the opportunity to influence care including screening for glucose intolerance followed by interventions such as diet and lifestyle modification that have the potential to prevent type 2 diabetes [7]. Existing studies have mainly focused on the role of obstetricians and physicians in postpartum care of women with gestational

* Corresponding author at: Women's Health Research Unit, The Blizard Institute, Queen Mary University of London, London, UK. Tel.: +44 20 7882 5884; fax: +44 20 7882 6047.

E-mail address: g.rayanagoudar@qmul.ac.uk (G. Rayanagoudar).

diabetes [8]. We conducted a survey to assess the knowledge and practices of all relevant healthcare professionals including midwives in the care of these women.

Materials and methods

We undertook a questionnaire-based survey of clinicians including consultants and senior trainees in obstetrics and diabetes, general practitioners and midwives between May and September 2014. The questionnaire focused on the following domains in the care of women with gestational diabetes after delivery: screening for type 2 diabetes and strategies to prevent type 2 diabetes, risk perception and responsibility for care. Questions related to diagnostic approach explored the preferred timing, method and frequency of postpartum screening for glucose intolerance. Preventative action focused on the steps taken by healthcare professionals to prevent or delay progression to type 2 diabetes in women with gestational diabetes. We studied the variation in healthcare professionals' perception of gestational diabetes as a future risk factor for type 2 diabetes, among relevant specialties. We obtained their opinion on whom they consider responsible for postpartum follow-up of women with gestational diabetes. Ethical approval was not needed and informed consent was implied by completion of survey.

The survey questionnaire was available in paper and email format. Healthcare professionals in the hospital, where study authors are based, were approached at work with survey information and questionnaire. Other hospital professionals based outside East London, mainly in West Midlands, were identified by professional networks of authors and received email questionnaires. The general practitioners surveyed were based in Essex and West Midlands and were identified by authors' clinical and professional connections. The healthcare professionals surveyed received up to three reminders to help complete the survey. The final version of the questionnaire had 12 questions ([Supplementary Material S1](#)). The questions were short and closed-ended with multiple-choice options, and the form was designed to be completed in 5–10 min. Statistical analyses were conducted to describe, for each specialty, the number and proportion of respondents in each choice of the 12 questions included in the questionnaire. As there was a slight variation in the number of respondents among the specialties, overall specialties proportions were computed by the inverse of variance weighted average. Exact 95% CI intervals for proportions were computed using the Wilson method [9]. Between-specialty homogeneity of proportions was tested using a chi-squared test. All analyses were performed using Stata 12 statistical software [10].

Results

We distributed questionnaires to 106 healthcare professionals through paper-based and electronic methods, and ninety-two (87%) responded. The response rate among diabetologists was 87% (20/23), obstetricians 84% (21/25), midwives 84% (21/25) and general practitioners 91% (30/33). The respondents practiced in East London (73%, 67/92) and in the West Midlands (27%, 25/92) in England. [Table 1](#) outlines the important findings of the survey.

Oral glucose tolerance test (OGTT) was the most preferred test for postpartum screening (57%, 52/92) although there was a significant difference in preference of glucose tolerance test between specialties ($p = 0.00$). While more than 70% (44/62) as a whole in secondary care preferred OGTT, only 27% (8/30) of general practitioners reported this as their choice of test. The general practitioners instead preferred fasting glucose (50%, 15/30) and glycated hemoglobin (HbA1c; 47%, 14/30). Just a quarter of diabetologists (25%, 5/20), one-third of obstetricians (33%, 7/21)

and 14% (3/21) of midwives chose fasting glucose. One in seven secondary care professionals (15%, 9/62) chose HbA1c as their preferred test. The most common reason for choosing a test was a protocol being in place, but the diabetologists and general practitioners considered sensitivity of a test as more important.

The majority of the respondents (75%, 69/92) preferred to test for glucose intolerance between six weeks and three months after delivery, with no significant difference ($p = 0.083$) when stratified by specialty. Nearly one in four general practitioners (23%, 7/30) opted to screen from three to six months following delivery, while only 3% (2/62) of hospital practitioners preferred this timeframe. If the initial test for post-partum diabetes was normal, two-thirds (65%, 60/92) opted to follow them up annually, with no significant difference among specialties ($p = 0.123$). Some respondents, including 29% of midwives (6/21), one-fifth of obstetricians (19%, 4/21) and one in ten general practitioners (10%, 3/30), indicated that they would not screen for diabetes long-term if the initial post-partum test was normal.

In women with a history of gestational diabetes, nearly all respondents (98%, 90/92) would offer dietary recommendations, with 91% (84/92) also suggesting exercise to prevent progression to diabetes. There was no significant difference in approach among specialties. Approximately 12% (11/92) of all respondents, including one in four obstetricians (24%, 5/21), were in favor of metformin therapy in addition to diet and exercise. In pregnant women with risk factors for gestational diabetes, a vast majority of respondents (95%, 87/92) reported that they would make dietary recommendations. More than three quarters (76%, 70/92) would also advise about importance of exercise. A small proportion (10%, 9/92) also felt that metformin would be an useful adjunct for primary prevention of gestational diabetes. The respondents (63%, 58/92) were receptive toward participating in future clinical trials on newer interventions in preventing gestational diabetes.

There was a significant difference, among the different specialties, in the perception of gestational diabetes as a predictor of progression to type 2 diabetes. Many obstetricians (43%, 9/21) felt that the risk of future diabetes is only increased 2-fold. A third of midwives (33%, 7/21) and approximately a quarter of general practitioners (23%, 7/30) felt the same. However, majority of the diabetologists (90%, 18/20) and general practitioners (60%, 18/30) perceived the lifetime risk of type 2 diabetes as being 4-fold or 7-fold. Nine midwives (43%, 9/21) were unsure about the risk. One in six general practitioners (17%, 5/30) was not confident of the estimated magnitude of risk of progression to type 2 diabetes.

There were significant differences in opinion, among the specialties, regarding the healthcare professionals responsible for early post-partum testing for glucose abnormalities. Half of the diabetologists (50%, 10/20) and 81% (17/21) of midwives felt that their own colleagues were responsible. A quarter of diabetologists (25%, 5/20) and 43% (9/21) of obstetricians believed that general practitioners should be testing for diabetes, while a significant proportion of general practitioners felt that diabetologists (30%, 9/30) or obstetricians (23%, 7/30) were responsible.

Overall, 82% (75/92) of respondents believed that general practitioners were responsible for long-term follow-up. Although 90% (27/30) of general practitioners who responded agreed with this, 10% (3/30) were either unsure or felt that long-term follow-up was the responsibility of secondary care.

Discussion

Our survey identified differences in risk perception of gestational diabetes as a prediabetic state, and the preferred screening strategy for progression to type 2 diabetes among relevant healthcare providers. There was a lack of consensus on who was responsible for postnatal screening for type 2 diabetes.

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