Obstetric Risks and Outcomes of Refugee Women at a Single Centre in Toronto

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Abstract

Objectives: Women who are refugees during pregnancy may be exposed to homelessness, poor nutrition, and limited access to health care, yet the pregnancy outcomes of this vulnerable population have not been systematically evaluated. We undertook a study to determine the risk of adverse obstetric and perinatal outcomes among refugee women in Toronto.

Methods: Using a retrospective cohort design, we examined pregnancy outcomes for refugee and non-refugee women delivering at St. Michael's Hospital in Toronto, between January 1, 2008, and December 31, 2010. The primary outcome measures were preterm delivery (< 37 weeks' gestational age), low birth weight (< 2500 g), and delivery by Caesarean section.

Results: Multiparous refugee women had a significantly higher rate of delivery by Caesarean section (36.4%), and a 1.5-fold increase in rate of low birth weight infants when compared with non-refugee women. In subgroup analysis by region of origin, women from Sub-Saharan Africa had significantly higher rates of low birth weight infants and Caesarean section than non-refugee control subjects. Further, compared with non-refugee control subjects, refugee women had significantly increased rates of prior Caesarean section, HIV-positive status, homelessness, social isolation, and delays in accessing prenatal care.

Conclusions: Refugee women constitute a higher-risk population with increased rates of adverse obstetric and perinatal outcomes. These findings provide preliminary data to guide targeted public health interventions towards meeting the needs for obstetric care of this vulnerable population. Recent changes to the Interim Federal Health Program have highlighted the importance of identifying and diminishing disparities in health outcomes between refugee and non-refugee populations.

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Résumé

Objectifs : Pendant la grossesse, les réfugiées pourraient être exposées à l'itinérance, à des carences alimentaires et à un accès limité aux soins de santé, et pourtant, les issues de grossesse que connaît cette population vulnérable n'ont pas fait l'objet d'une évaluation systématique. Nous avons entrepris de mener une étude visant à déterminer le risque de constater des issues obstétricales et périnatales indésirables chez les réfugiées de Toronto.

Méthodes : Au moyen d'un devis d'étude de cohorte rétrospective, nous nous sommes penchés sur les issues de grossesse connues par les réfugiées et les non-réfugiées ayant accouché au *St. Michael's Hospital* de Toronto entre le 1er janvier 2008 et le 31 décembre 2010. Les critères d'évaluation primaires ont été l'accouchement préterme (âge gestationnel < 37 semaines), le faible poids de naissance (< 2 500 g) et l'accouchement par césarienne.

Résultats : Les réfugiées multipares présentaient un taux considérablement accru d'accouchement par césarienne (36,4 %) et un taux de nouveau-nés de faible poids de naissance équivalant à une fois et demie celui qui était associé aux non-réfugiées. Dans le cadre d'une analyse de sous-groupe par région d'origine, nous avons constaté que les femmes d'Afrique subsaharienne présentaient des taux considérablement plus élevés de césarienne et de nouveau-nés de faible poids de naissance que ceux des non-réfugiées (groupe témoin). De surcroît, par comparaison avec ces dernières, les réfugiées présentaient des taux considérablement accrus d'antécédents de césarienne, de séropositivité pour le VIH, d'itinérance, d'isolement social et de délais pour ce qui est de l'accès aux soins prénataux.

Conclusions : Les réfugiées constituent une population exposée à des risques élevés qui présente des taux accrus d'issues obstétricales et périnatales indésirables. Ces constatations offrent des données préliminaires qui permettent d'orienter la mise en œuvre d'interventions de santé publique ciblées visant à répondre aux besoins de cette population vulnérable en matière de soins obstétricaux. Les récentes modifications qui ont été apportées au Programme fédéral de santé intérimaire ont souligné l'importance de l'identification et de l'atténuation des écarts constatés en matière d'issues de santé entre les populations réfugiées et non réfugiées.

INTRODUCTION

Between 2007 and 2011, 1.27 million migrants entered Canada.[1] Approximately 10% of these migrants were refugees, who have been observed to have lower levels of health than their immigrant and native-born counterparts.[1,2] The poorer health status of refugees, who by definition were forcefully displaced, is mediated by multiple factors including socioeconomic characteristics (ethnicity, gender, income, education, and occupation) as well as living conditions and access to health services.[3] Women are particularly vulnerable as they are more likely to have additional barriers to health care access including limited language proficiency, social isolation, and poverty.[4,5] Documented refugee claimants to Canada have access to health services through the Interim Federal Health Program (IFHP). Recent changes to the IFHP that decreased coverage for antenatal, intrapartum, and postpartum care in particular subsets of pregnant refugee women (rejected refugee claimants and those from designated countries of origin) create added ambiguity in care, and place this vulnerable population with increased risk of maternal morbidity at even greater peril.[6–8]

In a study of 7234 deliveries at the same inner city hospital as the current study, Shah and colleagues found that foreign-born women had a significantly higher risk than Canadian-born women of having low birth weight infants (OR 1.92; 95% CI 1.29 to 2.85) and delivery by Caesarean section (OR 1.16; CI 1.01 to 1.34).[9] Refugees are a unique subset of migrants who are at increased risk of adverse health outcomes.[3,9] During pregnancy, refugee women may be exposed to violence, homelessness, poor health and nutrition, and limited access to health care resources.[3,5] Yet there is a paucity of Canadian data documenting the pregnancy risks and outcomes of this vulnerable population. The goal of this study was to address this knowledge gap and to determine the risk of adverse obstetric and perinatal outcomes among Toronto's refugee population.

METHODS

Using a retrospective cohort design, we examined the birth outcomes of refugee and non-refugee women who had singleton live-born deliveries at St. Michael's Hospital in Toronto between January 1, 2008, and December 31, 2010. St. Michael's Hospital is an academic hospital fully affiliated with the University of Toronto and predominantly serving an inner city population in an ethnically diverse region. The hospital has approximately 3000 deliveries per year and is equipped with a level II nursery. It provides obstetric care to all women who are permanent residents, landed immigrants, or refugees in Ontario, whether or not they have a valid provincial health card number or other form of health insurance.

The primary outcome measures were preterm delivery (< 37 weeks' gestational age), low birth weight infants (less than 2500 g) and delivery by CS. Secondary outcomes included maternal medical comorbidities, timing of prenatal care, homelessness, and documented poor social supports. For this study, we defined "late to prenatal care" as having an initial documenting visit in our centre beyond 20 weeks' gestational age. "Homelessness" was defined as the listing of a homeless shelter as primary residence.

All live singleton births from January 1, 2008, to December 31, 2010, were included in the study. Women were excluded if delivery occurred outside of hospital and if the pregnancy was a second pregnancy during the study period. Multiple gestations and stillbirths were also excluded. Refugee women were identified by their use of the IFHP, which was a searchable variable in the hospital's registration database. Once refugee women who delivered at the hospital during the study period were identified, the subsequent singleton live birth was used to create the non-refugee control cohort. All non-refugee women were grouped together to form the control group, including immigrants, permanent residents, and Canadian citizens (both Canadian-born and foreign-born). Patients' demographic and socioeconomic characteristics and medical and obstetrical history were extracted from the official Ontario antenatal forms, labour and delivery record, and refugee claimant status papers. Refugee women were grouped into region of origin according to the World Bank Classification (Appendix). Country of origin data were not available for the non-refugee women who were not born in Canada.

All statistical analysis was performed using Microsoft Excel (Microsoft Corp., Redmond WA). Descriptive statistics were calculated for maternal age, gravidity, parity, and housing status. Maternal and infant characteristics were presented as a mean or rate. Two group *t* tests were used to compare means of refugee and non-refugee women. Chi-square tests were used to examine two-way associations between categorical variables. *P* values < 0.05 were considered significant.

The study protocol was reviewed and approved by the St Michael's Hospital Research Ethics Board.

RESULTS

Between January 2008 and the end of December 2010, there were 8811 deliveries at St. Michael's Hospital, of which 3.2% (n = 282) involved refugee women. Of the