Women and Birth 28 (2015) e148–e156

Contents lists available at ScienceDirect

Women and Birth

journal homepage: www.elsevier.com/locate/wombi

ORIGINAL RESEARCH – QUANTITATIVE

A glance into the hidden burden of maternal morbidity and patterns of management in a Palestinian governmental referral hospital

Sahar J. Hassan [a,*], Laura Wick [a], Jocelyn DeJong [b]

[a] Institute of Community and Public Health, Birzeit University, Birzeit, State of Palestine
[b] American University of Beirut, Faculty of Health Sciences, Lebanon

ARTICLE INFO

Article history:
Received 17 June 2015
Received in revised form 29 July 2015
Accepted 17 August 2015

Keywords:
Maternal morbidity
Childbirth
Burden
Palestine
Patterns of management

ABSTRACT

Background: Little is known about the burden and patterns of maternal morbidity during childbirth, particularly in the Middle East Region. Investigating the patterns of maternal morbidity can be useful in guiding improvement in the quality of maternal services, and informing policy debates on women's health.
Objective: To examine the incidence, types and patterns of management of severe and non-severe maternal morbidities of Palestinian women during pregnancy, labour, delivery and up to seven days postpartum in one Palestinian hospital.
Methods: A prospective hospital-based study was conducted for a 3-month period in 2011–2012, reviewing hospital records for all pregnant women (1.583) admitted to the governmental hospital in Ramallah, Palestine.
Findings: Of all pregnant women included in this analysis (1.558), 419 (26.9%) women experienced one or more maternal morbidities and 15 (0.96%) women survived a life-threatening complication (near miss). Of all women who suffered morbidities, 69 (16.5%) had vaginal deliveries, 61 (14.6%) had cesarean sections, 179 (42.7%) had abortions/miscarriage, and 110 (26.3%) experienced complications during pregnancy or the post-partum. Hemorrhage during pregnancy, birth or postpartum was the most common morbidity. Of those who gave birth, women who gave birth by cesarean sections were three times more likely to suffer from morbidities than those who had vaginal delivery.
Conclusions: The burden of maternal morbidity for Palestinian women between the ages of 16 and 48 is high. In Palestine, maternal morbidity can be prevented by promoting a rational use of cesarean section, avoiding unnecessary medicalization, reducing unwanted pregnancies and updating practices of providers related to abortion/miscarriage care.

1. Introduction

While maternal health is considered a priority in the Middle East Region, little is known about the burden and patterns of maternal morbidity that are an integral part of women's lives.[1] In Palestine, as in many other countries in the region, the coverage of antenatal care and childbirth in hospitals is almost universal and service utilization is high. Midwives attend the majority of vaginal births. However, practices during childbirth are not consistent with current evidence.[2] These practices include routine amniotomy, augmentation of labour, episiotomy, and intravenous fluids, frequent vaginal examination and restrictions on mobility, and on drinking liquids. Maternal morbidity data can provide indicators of the burden and management of disease. Improving quality of care has been shown to be a complex process in all environments, but in contexts with on-going political and economic instability, barriers to building a healthcare system and strengthening institutions is even more daunting.

Currently, the only two national indicators collected in Palestine on hospital-based deliveries are cesarean section (CS) (with no indications) (20.3%) and maternal deaths (24.1 per 10,000). Maternal mortality is a rare incident and is likely to be underreported even in developed countries[3] and country-specific

* Corresponding author at: Institute of Community and Public Health, Birzeit University, Box 14, Birzeit, West Bank, State of Palestine. Tel.: +972 2298 2020; fax: +972 2298 2079.
E-mail addresses: saharjhassan@gmail.com (S.J. Hassan), lwick@birzeit.edu (L. Wick), jd16@aub.edu.lb (J. DeJong).

http://dx.doi.org/10.1016/j.wombi.2015.08.008
1871-5192/

maternal morbidity data (other than self-reporting) is difficult and costly to obtain. Currently, only 57% of married women aged 15–49 years use family planning methods, and the intrauterine device is the most common method (26%).[4]

Research on maternal morbidity has suffered from the use of different definitions and criteria (disease-specific, management, or organ system dysfunction).[5] A recent WHO scoping exercise emphasized the need for including non-life threatening maternal morbidities in assessments,[6] in addition to near-miss cases, defined as "a woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy".[7] In the past decade, studies by the Choices and Challenges in Changing Childbirth research network in four Arab countries were focused on normal childbirth and showed that, births occur primarily in hospitals, with skilled birth attendants, yet practices during normal labour are not according to the best available evidence.[2,8] These studies documented overuse of unnecessary interventions during normal labour, escalation in the CS rate[9,10] and challenges in the existing health systems.[11] On the other hand, little is known about the magnitude of maternal morbidities.[12] A recent cross-sectional study in Marrakech showed that 44% of postpartum women reported at least one morbid event, including vaginal discharge, hemorrhoids, breast, episiotomy and anal problems, prolapse, bleeding, urinary problems and others.[12] A study in Qatar found that housewives and pregnant women with low monthly household income suffered higher risk of complications during pregnancy, primarily from gestational diabetes, hypertension, hemorrhage and anemia.[13] A prospective study from six public hospitals in Iraq studied the quality of care provided for women with severe complications reported suboptimal use of magnesium sulfate for preeclampsia and oxytocin for prevention of postpartum hemorrhage (PPH).[14]

With the aim of improving maternal and neonatal health care in a major public referral hospital in the West Bank of Palestine, the authors participated in a WHO funded four hospital comparative study of maternal and neonatal near-miss cases in Lebanon, Syria, Egypt and Palestine. This article presents the medical record review data analysis from the formative phase of this study in Ramallah Hospital, Palestine. In order to provide a broad snapshot of maternal morbidity, we decided to select not only the near-miss cases when women survive life-threatening conditions (i.e. organ dysfunction), but to include additionally less severe morbidities which may affect the quality of life of the woman and the family for years to come.[15] This information should be useful in understanding Palestinian women's needs during the reproductive years, guiding improvement in the quality of maternal services, and informing clinical and policy debates on women's health in the country. This facility-based data, which was rigorously and systematically collected and analyzed, can provide indications for urgently needed interventions in women's health. Stimulating debate is important not only for women's physical and psychological well-being, but also for the survival and development of the child and entire family,[15] in a context lacking social services, where women assume the role of caretakers of family members of all ages and disabilities.[16]

The aim of this study is to examine the incidence, types and patterns of management of severe and non-severe maternal morbidities of Palestinian women during pregnancy, labour, delivery and seven days postpartum in one major Palestinian referral government hospital in the West Bank.

2. Methods

This prospective study conducted in the public hospital in Ramallah, Palestine between September 25, 2011 and January 6, 2012 was based on medical records review of all admissions to the maternity ward. The data was collected as part of a multi-country study of maternal and neonatal near-miss women in four hospitals (Lebanon, Syria, Egypt and Palestine) using the WHO standard form (Individual Form HRP A65661).[17] Since it was difficult to identify women who experience a near-miss event among admissions to the hospital (eligibility criteria for the WHO standard form), we chose to fill the form for all pregnant women admitted to give birth, to be observed or treated for pregnancy complications or complaining of signs of abortion/miscarriage or ectopic pregnancy as well as postpartum women with complications (the first seven days after giving birth), and maternal deaths. The maternal outcome, gestational age and neonatal outcome were also collected during the hospital stay. We also collected data on the coverage of selected evidence-based interventions used for prevention and treatment of (PPH), severe preeclampsia, eclampsia, use of antibiotics for prevention of infection during CS and treatment of sepsis and preterm labour.

2.1. Study setting

The study was conducted in Ramallah Hospital, a general referral public hospital in Ramallah governorate that serves 75 localities and 6 refugee camps. In 2011, 4517 deliveries took place in the maternity ward and the CS rate was 21.4%. The maternity ward consists of 28 beds and offers free services covered by the local health insurance, including the neonatal intensive care unit. The hospital is a main teaching hospital for Palestinian medical, nursing and midwifery students.

2.2. Data collection

The data was collected by a midwife and a nurse trained by the principal investigator (PI) on the data collection tool, data extraction through record review and identification of complications and near-miss cases (WHO definition). The data was collected on a daily basis from the medical records that are not yet computerized, for all eligible women admitted over 24 h, regardless of gestational age, up to 7 days postpartum. The hospital discharge register was used to identify all women as it was the most accurate and complete register. We cross-checked women who gave birth with the birth register every day. We reviewed the medical records of all women for registration, history, physicians' orders, nurses' notes, observation, surgery notes, medication sheets and laboratory results. Women who were identified as near-miss cases or with severe complications were verified by a senior obstetrician.

2.3. Data analysis

The data was entered into CsPro software,[18] which helped to ensure high quality data entry and quality checks on data entry. Data analysis was performed using IBM SPSS (version 19). Descriptive statistics, frequency counts and percentages were produced for all women and then stratified by parity and mode of delivery. We created the maternal morbidity variable from the data set and accounted for all women who suffered from any of the following conditions: obstetric or maternal complications (direct and indirect causes), related procedures/interventions, and life-threatening complications. Descriptive analysis was also performed for perinatal outcomes of pregnancy and stratified by morbidity. Independent *t*-test was used to test the difference between means, and Chi-square and Fisher's exact statistics were used to compare proportions. *P*-values of less than 0.05 were considered significant.