



www.figo.org

Contents lists available at ScienceDirect

International Journal of Gynecology and Obstetrics

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



CLINICAL ARTICLE

Audit of cesarean delivery in Burkina Faso

Seni Kouanda^{a,b,*}, Abou Coulibaly^a, Ali Ouedraogo^{c,d}, Tieba Millogo^a, Bertrand I. Meda^a, Alexandre Dumont^e^a Département Biomédical et santé publique, Institut de Recherche en Sciences de la santé (IRSS), Ouagadougou, Burkina Faso^b Institut africain de santé publique (IASP), Ouagadougou, Burkina Faso^c Unité de Formation et de Recherche en sciences de la santé, Université de Ouagadougou, Burkina Faso^d Centre Hospitalier Universitaire Yalgado Ouedraogo, Ouagadougou, Burkina Faso^e Research Institute for Development, Université Paris Descartes, Sorbonne Paris Cité, UMR 216, Paris, France

ARTICLE INFO

Article history:

Received 1 July 2013

Received in revised form 25 November 2013

Accepted 11 February 2014

Keywords:

Low-resource settings

Task shifting

Unnecessary cesarean delivery

ABSTRACT

Objective: To assess the level and determinants of unnecessary cesarean delivery. **Methods:** In a retrospective study, the medical charts were reviewed for 300 low-risk women who underwent intrapartum cesarean delivery at 10 referral hospitals in Burkina Faso between May 2009 and April 2010. In this context, cesarean deliveries were delegated to clinical officers who have less training than doctors. **Results:** Among the 300 study patients, 223 women (74.3%) were referred from primary healthcare facilities. The reason for referral was not medically justified for 35 women. Cesarean was performed by a gynecologist–obstetrician (46.0%), a trained doctor (35.0%), or a clinical officer (19.0%). Acute fetal distress and fetopelvic disproportion were the main indications recorded for intrapartum cesarean delivery. These diagnoses were not confirmed by an obstetrician–gynecologist in 12.0% of cases. Clinical officers were associated with a higher risk of unnecessary cesarean delivery compared with gynecologist–obstetricians by multivariate analysis (odds ratio, 4.46; 95% confidence interval, 1.44–13.77; $P = 0.009$). **Conclusion:** Verification of cesarean indications by highly qualified personnel (i.e. second opinion), in-service training, and supervision of health workers in primary healthcare facilities might improve the performance of the referral system and help to reduce unnecessary cesarean deliveries in Burkina Faso.

© 2014 International Federation of Gynecology and Obstetrics. Published by Elsevier Ireland Ltd. All rights reserved.

1. Introduction

Cesarean delivery has been shown to be effective at reducing maternal mortality, and the WHO has estimated that cesarean rates of 5%–15% are necessary for a significant reduction in mortality [1–3]. According to estimations made in 2007–2008, the prevalence of cesarean deliveries is relatively high in high-resource countries, ranging from 29.3% in Germany to 39.8% in Italy [4]. In some Latin American countries such as Mexico, this prevalence is as high as 43.9% [4].

In Africa, the prevalence of cesarean delivery in the population is much lower. For example, a recent study estimated a prevalence of 1.9% in West Africa [5]. Country-specific rates of cesarean delivery ranged from 3.1% in Malawi and 1.9% in Mozambique in 2007 to 0.7% in Burkina Faso in 2009 [6].

Although the population-based rates of cesarean delivery remain low in West Africa, the institutional rates are often much higher. In some hospitals, more than 50% of women deliver by cesarean [7].

Such high rates may be associated with an excessive proportion of high-risk women as found in many referral hospitals in West Africa. However, previous studies in this context have failed to correlate the rate of hospital-based cesarean delivery with the risk level of the patients [8–11]. Those studies were mainly carried out in a single health specialist training facility and included all women who underwent cesarean delivery regardless of the initial obstetric situation on admission to the labor room. It is, therefore, important to consider the quality of the cesarean and to determine whether all such deliveries are medically justified. To our knowledge, no previous studies have analyzed the indications for cesarean delivery in West Africa.

Burkina Faso is a Sahelian country located in the middle of West Africa, bordering Mali, Niger, Benin, Togo, Ghana, and Côte d'Ivoire, and covering an area of 274 200 km². According to the 2006 census (RGPH), the population of Burkina Faso was 14 017 262 people. Women represented 51.7% of the total population and the total fertility rate was 6.2 children per woman [12]. In this country, cesarean deliveries are performed by gynecologist–obstetricians, general practitioners trained in emergency surgery, and clinical officers (attachés de santé en chirurgie) who are nurses trained in cesarean delivery.

In Burkina Faso, a clinical audit previously focused on cesarean delivery among all women in referral hospitals 4 years after the partial abolition of user fees in 2006 [13]. However, it is also important to focus on

* Corresponding author at: Institut de Recherche en Sciences de la santé, 03 BP 7192 Ouagadougou, Burkina Faso. Tel.: +226 50333594.
E-mail address: skouanda@irss.bf (S. Kouanda).

indications among low-risk women that are not medically justified in order to identify interventions that might be avoided. This approach has been used by Chaillet [14] to reduce hospital-based cesarean deliveries in Quebec.

The objective of the present study was to analyze indications for cesarean delivery among low-risk women in referral hospitals in Burkina Faso. Specifically, the study aimed, first, to classify the indications for cesarean among low-risk women; second, to identify cesarean deliveries with non-medically justified indications; and third, to determine socio-demographic and care factors associated with cesarean deliveries with non-medically justified indications.

2. Materials and methods

The present retrospective analysis reviewed the medical records of low-risk women who underwent cesarean delivery between June 1, 2009, and May 31, 2010, in 5 regions of Burkina Faso that were identified as having a high number of cesarean deliveries. The study received ethical approval from the National Ethic Committee for Health Research. Hospital practitioners were not aware of which medical charts would be sampled and gave their consent to participation.

In Burkina Faso, there are 13 health regions corresponding to the administrative regions. Each region has 4–6 health districts and a regional hospital. Each district has a medical center with a surgical unit, a named district hospital, and several primary healthcare facilities. In general, the district hospitals have a clinical officer or a trained doctor, but no gynecologist–obstetrician. In addition to the above healthcare facilities, there are 3 university hospitals (CHUYO in Ouagadougou, CHUSS in Bobo-Dioulasso and Charles de Gaulle Pediatric Hospital in Ouagadougou).

For the study, the different health regions were classified according to the number of cesarean deliveries performed during the study period; this information was obtained from the needs assessment of emergency obstetric and newborn care in Burkina Faso. Five regions with the greatest number of cesarean deliveries were selected for the study: Centre, Hauts-Bassins, Boucle du Mouhoun, Centre-Est, and Est.

All regional or university hospitals (CHR or CHU) in each of these regions were surveyed, together with 1 randomly selected district hospital without a specialist (gynecologist–obstetrician) from each region. Thus, the study included 2 university hospitals (Yalgado Ouedraogo and Sourou Sanou), 3 regional hospitals (Tenkodogo, Fada, and Dédougou), and 5 district hospitals (Bogodogo, Koupéla, Diapaga, Houndé, and Solenzo) (Table 1).

The records available in each hospital (maternity and operating theater registers, anesthesia reports, partographs, and clinical charts) were used to identify all patients with intrapartum cesarean delivery during the study period. Women with absolute indications, including severe prepartum hemorrhage, severe deformed pelvis, obstructed labor, rupture of the uterus, and malpresentation (transverse, oblique, or brow), were excluded. Among the remaining patients, low-risk women for cesarean delivery were identified by using predefined criteria. For each study hospital, the sample included the last 30 cesarean deliveries among low-risk women on an arbitrary date.

Via a standardized form, data were collected for each cesarean delivery including characteristics of the patient, the reason for referral if the patient was referred from another healthcare facility, the indication for cesarean, labor monitoring, and perinatal and maternal outcomes. Data

collection involved 2 phases. The first phase was conducted from August to September 2010 during the UN Needs Assessment survey. The second phase, conducted in August 2011, was used to complete some survey forms on the basis of requests from an expert (gynecologist–obstetrician).

The survey forms were reviewed by 2 independent experts. The hospital and the names of clinicians had been erased in order to respect confidentiality. Indications for intrapartum cesarean were classified independently by each expert as medically justified or non-medically justified according to the information available. If the information was not complete, additional data were collected and the form was reviewed again. When the both experts disagreed about justification for the cesarean, the opinion of a third expert was sought and this last opinion was used in the analysis.

An indication was classified as medically justified if any problem detected during labor or immediately postpartum confirmed the diagnosis of the clinician, and as non-medically justified if the available information did not confirm the diagnosis. For example, acute fetal distress was confirmed by experts according to the following criteria: meconium staining, abnormal fetal heart rate measured by intermittent auscultation, and a 5-minute Apgar score of less than 7. The criteria for cephalopelvic disproportion were failure to progress despite the use of oxytocin, abnormal maternal pelvis, and birth weight more than 4500 g. If one of these signs was not retrieved from the medical chart by the experts, the diagnosis of acute fetal distress or fetopelvic disproportion was rejected.

Data were entered into the software CPRO (Census and Survey Process System) and analyzed via Stata version 12 (StataCorp, College Station, TX, USA). The proportion of women with non-medically justified cesarean was assessed. Each of the possible explanatory variables collected for each patient and each hospital was independently evaluated for its association with the risk of non-medically justified cesarean by Pearson χ^2 test for qualitative variables. The sociodemographic and clinical characteristics of the woman, in addition to the qualification of the operator, were assessed. Multivariate and 2-level analysis (generalized linear mixed model) was used to account for clustering of women within hospitals, and maternal and institutional characteristics (hospital type). The initial model included all variables with a *P* value of less than 0.20 in the univariate analyses. Backward elimination (based on a *P* value of more than 0.05) was used to select the best combination of variables that were independent statistically significant predictors of non-medically justified cesarean delivery.

3. Results

In total, 300 medical charts (30 charts from each of the 10 participating hospitals) were reviewed by the expert gynecologist–obstetricians. Table 2 presents the characteristics of the low-risk women who underwent intrapartum cesarean delivery. Overall, 50.0% of the women were younger than 25 years, 57.0% lived in rural areas, and most were married and housewives. The women were mostly nulliparous; only 57 (19.0%) had a history of cesarean delivery. All women were monitored at least once during pregnancy and 81.3% had completed at least 3 prenatal visits (Table 2).

Overall, 223 women (74.3%) had been referred from primary healthcare facilities (Table 3). The main reasons for referral were the failure to progress (17.0%), cephalopelvic disproportion (16.1%), acute fetal

Table 1

Number of deliveries between May 2009 and April 2010 in 5 regions performing a high number of cesarean deliveries.

	Centre		Hauts-Bassins		L'Est		Boucle du Mouhoun		Centre-Est	
Health facility	Yalgado	Secteur 30	Sanou Sourou	Houndé	Fada	Diapaga	Dédougou	Solenzo	Tenkodogo	Koupéla
Type of health facility	CHU	CMA	CHU	CMA	CHR	CMA	CHR	CMA	CHR	CMA
No. of deliveries	4694	2680	4689	1226	771	636	914	536	937	978
No. of cesarean deliveries	1886	697	788	125	253	230	231	221	267	249

Abbreviations: CHR, regional hospital; CHU, university hospital; CMA, medical center with surgical unit.

Download English Version:

<https://daneshyari.com/en/article/6186943>

Download Persian Version:

<https://daneshyari.com/article/6186943>

[Daneshyari.com](https://daneshyari.com)