

Delivery on Scarred Uterus at Souro Sanou Teaching Hospital, Burkina Faso (about 531 Cases)

Yaméogo Réwendé Barnabé¹, Kaboré Ahmed², Komboigo Béwendin Evélyne¹, Somé Der Adolphe¹, Bambara Moussa¹

¹Obstetrics-Gynecology and Reproductive Medicine Department, Souro Sanou Teaching Hospital, Bobo Dioulasso, Burkina Faso

²Public Health Department, Joseph Ki-Zerbo University, Ouagadougou, Burkina Faso

Email: barnayam@yahoo.fr

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Abstract

Introduction: Therapeutic conduct for delivery via a scarred uterus is controversial in modern obstetrics. Some authors recommend a cesarean section. The purpose of this study was to analyse the conduct and prognosis of delivery via scarred uterus at Souro Sanou Teaching Hospital in Bobo-Dioulasso. **Methods:** We conducted a descriptive cross-sectional study from January 1 to December 31, 2017. Data were collected from medical, birth, and operating room records. **Result:** In total, 531 scarred uterus deliveries and 5293 deliveries have been recorded in our study; the frequency of deliveries via a scarred uterus was 9.96%. The average age of the patients was 28.02 years old, with extremes of 17 and 44 years. The average parity was 2.34, with extremes of 1 and 8. Patients with a spacing interval between births of at least 24 months accounted for 86.6% of observed patients. Patients with a single scar uterus made up 70.6% of the population. There were 349 (65.73%) patients who had an emergency caesarean section during a previous delivery. The trial of vaginal delivery via a scarred uterus was conducted on 182 patients with a success rate of 89.56%. There was no maternal death. However, we noted 23 foetal deaths (4.33%). **Conclusion:** More than 50% of parturient women with a single caesarean uterine scar who underwent the uterine test gave birth vaginally in our department. However, like most previous studies on the subject, we recommend vaginal delivery in the presence of a prior caesarean-scarred uterus whenever possible.

Keywords

Scarred Uterus, Delivery, Bobo Dioulasso

1. Introduction

The procedure for proper therapeutic conduct in the case of a scarred uterus is a frequently discussed topic in modern obstetrics. Some authors tend to recommend caesarean section as a method of managing delivery for a patient with a scarred uterus [1]. Other authors recommend vaginal delivery to slow the global increase in the rate of caesarean sections if specific parameters are observed [2]. Indeed, the rate of caesarean sections in the United States rose from 8.8% in 1970 to 21.4% in 2001 [3]. In France, the number of caesarean sections has increased threefold in the last 30 years, from 6.1% in 1972 to more than 20% in 2007. This phenomenon is reflected in the correlated increase in the number of patients with a scarred uterus, which now stands at around 10% [4]. In Africa, the rate of delivery via a scarred uterus varies from one city to another. For instance, the rate is 5.92% in Bobo-Dioulasso [5] and 8.45% in Niamey [6].

In our department, there is no formal therapeutic protocol for delivery via a scarred uterus. The purpose of this study was to evaluate the conduct and prognosis of delivery via a scarred uterus at Souro Sanou Teaching Hospital in Bobo-Dioulasso.

2. Methods

We conducted a cross-sectional descriptive study in the Department of Gynaecology, Obstetrics, and Reproductive Medicine of Souro Sanou Teaching Hospital in Bobo Dioulasso, Burkina Faso, from January 1 to December 31, 2017. All patients with a scarred uterus admitted to the department during the study period for either labour or elective caesarean section procedures were included in the study. Only the scars of previous caesarean sections were taken into account, thus excluding myomectomy scars and other surgical scars on the uterus. Data was collected from clinical, and delivery and operating room records. The variables studied were the socio-demographic characteristics, clinical aspects, therapeutic aspects, and maternal and foetal prognosis. The collected data was entered and analysed on a microcomputer using SPSS software (Version 12.0). Microsoft Excel and Word 2013 were also used to complete this study.

3. Results

3.1. Patient Characteristics

In 12 months, we recorded 5293 deliveries, 531 of which were via a scarred uterus, corresponding to a frequency of 9.96%. The average age of the patients was 28.02 years with extremes of 17 and 44 years old. The 25 - 29 age group represented 31.07% of the total population (**Table 1**). The average parity was 2.34, with extremes of 1 and 8. The distribution of patients according to parity is reported in **Table 2**. As for the education level of patients, 52.54% had no education, 19.58% had a primary-level, 16.95% had a secondary-level, and 10.92% of patients had a university-level education.

Table 1. Distribution of patients by age groups.

Age group	Number	%
15 - 19	27	5.1
20 - 24	111	20.9
25 - 29	165	31.07
30 - 34	154	29
35 - 39	58	10.92
40 - 44	16	3.01
Total	531	100

Table 2. Distribution of patients according to parity.

Parity	Number	%
Primiparous	209	39.36
Pauciparous	230	43.31
Multiparous	68	12.81
Grand multiparous	24	4.52
Total	531	100

3.2. Uterine Scars

Patients with single, double, triple, or more uterine scars accounted for 70.62%, 23.54%, and 7.72% of the population, respectively. In our department, patients with an intergenetic period (IGP) of 6 - 24 months accounted for 12.62% of the population, while 86.62% of patients had an IGP longer than 24 months.

3.3. Prognosis of Labour

3.3.1. Systematic Caesarean Section

Emergency caesarean sections were performed on 349 patients, representing 65.73% of all patients with a scarred uterus. Patients with two or more uterine scars from prior caesarean sections were systematically given another caesarean section. The indications for systematic cesarean section were given in the delivery room or in the antenatal consultation room, prior to performing the section. Among these indications were 98 cases of foetal distress (20.80%), 30 cases of pre-uterine rupture (8.59%), 44 cases of generally narrowed pelvis (12.61%), 11 cases of hemorrhagic placenta previa (3.15%), 125 cases of elective cesarean section for those patients with two prior uterine scars (35.82%), and 41 cases of elective surgery for patients with three or more uterine scars (**Table 3**).

3.3.2. Uterine Test

Of the 531 patients with a scarred uterus, a uterine test was indicated in 182, which corresponds to 34.27% of the population. All had a single uterine scar. Of

Table 3. Distribution of patients according caesarean section indication.

Indication	Number	%
Foetal distress	98	28.08
Prerupture syndrome	30	8.59
Narrow pelvis	44	12.61
Placenta praevia	11	3.15
Uterus with 2 scars	125	35.82
3 or more uterine scars	41	11.75
Total	349	100

the 182 parturient women who underwent the uterine test, 163 were able to give birth vaginally, with a success rate of 89.56% compared to 10.44% of women who failed the test. The theoretical conditions for vaginal delivery were as follows: single pregnancy, cephalic presentation, an absence of a corporeal scar (once the operating protocol was known), an ultrasound-based estimated foetal weight of less than 3800 grams, a clinically normal pelvis, a placenta non covering, an absence of foetal distress or any other obstetrical emergency, and the continuous presence of medical personnel in the labour room.

3.3.3. Failure of the Uterine Test

There were 19 cases of unsuccessful uterine tests, which represented 10.44% of all tests. All these parturient women did not give birth vaginally; all underwent caesarean section. The causes of failure of the uterine test were dominated by dynamic dystocia (52%) and acute foetal distress (35%).

3.4. Maternal and Foetal Prognosis

There were no maternal deaths; however, out of a total of 20 complications corresponding to 3.77% of deliveries via a scarred uterus, we noted five cases of parietal suppurations *i.e.* 2 cases of parietal suppurations among the women who underwent caesarean section and 3 cases among women who gave birth vaginally. Four cases of endometritis that progressed favourably under antibiotics have been noted among women who underwent caesarean section compared to 0 case in those who gave birth vaginally. We found 11 cases (2.07%) of postpartum anaemia among the women who underwent caesarean section due to placenta previa compared to 5 cases (0.9%) of postpartum anaemia in those who gave birth vaginally on the scarred uterus managed in the department.

Of the 531 births, 508 were live births, and 23 cases of foetal deaths were recorded, representing 4.33% of all births. These cases of foetal death were noted only among the women who underwent caesarean section. These foetal deaths were composed of four cases of hemorrhagic placenta previa, thirteen cases of foetal distress resuscitated in vain, and six foetal deaths of unknown cause.

4. Discussion

Over the course of this century, doctors' opinions and attitudes about the proper method of delivery needed for patients with a scarred uterus have changed. Over the century people's attitudes toward women with women with scarred uteruses have evolved. A choice must be made between the two extremes of making iterative caesarean sections systematic and making the percentage of caesarean sections comparable to that of secondiparous women who deliver vaginally [1] [7].

During our study period, 9.96% of patients that delivered had at least one prior caesarean scar. This rate is lower than that of previous studies conducted by Cissé (1.5%) [3], Tshilombo (2.4%) [8], and Dembélé (4.92%) [5]. The high proportion in our study can be attributed to the fact that the majority of high-risk deliveries are referred to our facility, including deliveries via scarred uterus. Women with a scarred uterus and an IGP longer than 24 months accounted for 86.62% of patients. This rate is higher than those of studies by Koulimaya [8] and Nayama [9], who reported 37.9% and 56.8%, respectively. This is due to a variety of reasons: 1) increased practitioner emphasis on family planning counselling and related medical indications of such planning; 2) women's increased awareness of the risks associated with more than one pregnancy within a two-year period; and 3) the increased availability of free contraception in our country over the past three years.

Of all patients with a scarred uterus, 65.73% had a systematic caesarean section and 12.61% had a caesarean section because of bone dystocia, which is a permanent indication of cesarean section. Lieberman's study found a 24% rate for systematic caesarean sections [10] while B. Mercer's revealed a 32% rate [11]. The variability of the rates among these studies is justified by the variability of the systematic indications of caesarean section on scarred uterus. The two most common indications in the literature for systematic caesarean section on scarred uterus are bone dystocia and breech presentation [7].

No uterine tests were attempted in parturient women with two or three uterine scars. This attitude is the one that seems to have been adopted in previous studies on the same subject conducted in West Africa [12] [13].

In our department, 34.27% of patients with a scarred uterus underwent a uterine test. All those who underwent the test had single uterine scars, and 89.56% of them gave birth vaginally. This success rate is similar to that of El Hanchi [14], who experienced an 87.5% success rate in his study. However, in some studies, the mode of delivery had a surgical tendency [15], as did ours (65.73%). Attitudes vary, but the authors are almost unanimous on one point: the vaginal approach is preferred, even for patients with two priors caesarean scars [11] [12] [16]. The nine cases (1.69%) of infectious complications that we reported are most likely due to the operating conditions in our facility and a lack of antibiotic therapy in the postoperative period.

In the literature, some authors report a low mortality rate for vaginal deliveries via scarred uterus, or even its absence, as was the case in our study [9] [17] [18].

5. Limits

The study has some limitations related to the cross-sectional type, and the extent of missing data due to poor filling of medical records and patients' register. But the results obtained are interesting and have been discussed, commented on, and compared to the data of the literature.

6. Conclusion

Less than half (34.27%) of the patients with a single uterine scar who came to our department for delivery were allowed to deliver vaginally. There was an 89.56% success rate in those who had uterine tests in the context of no protocol. In our study, the mode of delivery had a surgical tendency; however, with study results on this topic, vaginal deliveries are recommended for patients with scarred uterus whenever possible.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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