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Placenta Previa at Souro Sanou Teaching Hospital, Burkina Faso (About 142 Cases)

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Abstract

Introduction: Placenta previa is an obstetric emergency that can be life-threatening for both mother and foetus. Despite the progress made in diagnosis and treatment, it continues to be feared by obstetricians because of high maternal and perinatal mortality and increased morbidity. This study aims to investigate the diagnostic, therapeutic and prognostic aspects of placenta previa at the Sourô Sanou University Hospital in Bobo-Dioulasso. **Method:** This was a descriptive cross-sectional study with retrospective data collection from January 1, 2016 to December 31, 2018. Included were 142 pregnant women admitted to the maternity ward of the Sourô Sanou University Hospital (CHUSS) and diagnosed with placenta previa during pregnancy, labor, or in the postpartum period. **Result:** The frequency of placenta previa was 0.89%; the average age of patients was 28.51 years with extremes of 16 and 44 years. The multigestations represented 28.17% and the pauciparous 31.69%. Patients with a uterine scar represented 15.49%. Ultrasound diagnosis was made in 38 patients (26.76%). Placenta previa was recovered in 56.34% of cases. Patients with severe anaemia were 28.87%, and 57.04% of the anaemic cases received blood transfusion. Caesarean section was performed in 93.66% of patients. Four maternal deaths (2.81%) and 30 stillbirths (27.02%) were reported. **Conclusion:** Placenta previa remains a fairly frequent pathology with a non-negligible lethality rate and perinatal mortality in the maternity ward of the Sourô Sanou University Hospital.

Keywords

Placenta Previa, Prognosis, Bobo-Dioulasso

1. Introduction

Placenta previa is an obstetrical emergency that affects the maternal and foetal prognosis because of the dreaded hemorrhage that it causes. It is the 4th cause of maternal mortality during hemorrhage of the 3rd trimester and labor after uterine rupture, hemorrhage of delivery and retroplacental hematoma with rates ranging from 0.5% to 2.17% [1]. Despite the systematic use of ultrasound, which allows not only the diagnosis of placental insertion during pregnancy but also the modification of the therapeutic attitude, it remains a high-risk and very unpredictable pregnancy complication. Its frequency in Africa remains high; Buambo-Bamanga in Congo-Brazzaville [2] reported a frequency of 0.6%. In Burkina Faso, this pathology is most often diagnosed only during labor, after a hemorrhagic accident [3].

In the maternity ward of the Sourô Sanou University Hospital (CHUSS), Traoré in 2016 [1] reported a placenta previa frequency of 2.17% and a stillbirth rate of 12.70%. It seemed important to us in view of this finding to update the data on this pathology in order to contribute to the reduction of maternal and foetal morbidity and mortality.

2. Methods

We conducted a descriptive cross-sectional study with retrospective data collection in the Department of Gynecology, Obstetrics and Reproductive Medicine of the Sourô Sanou University Hospital of Bobo from January 1, 2016 to December 31, 2018. Pregnant women admitted to the obstetrics department and carrying a pregnancy at the end of 28 weeks of amenorrhea or more were included in the study. The sampling was exhaustive and the final sample consisted of 142 cases. The variables collected were sociodemographic data (age, main occupation, place of residence, socio-economic level, marital status), gynecological and obstetrical history (number of gestations, parity, number of abortions, number of caesarean sections), clinical (general condition, reason for admission) paraclinical (haemoglobin level, ultrasound result) and therapeutic data (mode of delivery, notion of transfusion). Data were collected from clinical records, delivery room and operating room registers. Placenta previa is defined as the insertion of part or all of the placenta on the lower segment.

The data collected was entered using a microcomputer and analyzed with Epi info software version 7.2.1.0. Word processing was done using Microsoft office 2016 and tables were done using Microsoft Excel.

Given the retrospective nature of the study, only medical records and registers were handled. All information was collected with respect to patient confidentiality. Data analysis was done without patient identities but rather with chart numbers.

3. Result

3.1. Frequency

In one year, we recorded 142 cases of placenta previa out of a total of 15,888 de-

liveries, *i.e.* a frequency of 0.89%.

3.2. Sociodemographic Characteristics

The average age of the patients was 28.51 years with extremes of 16 and 44 years, the age group 25 to 29 years represented 27.46% (Table 1).

3.3. Clinical Data

The metrorrhagia of the third trimester of pregnancy represented 57.74% of the reasons for admission (Table 2). The general condition of the patients was good, fair and poor in 24.65%, 71.83% and 3.52% respectively. Concerning obstetrical history, the average parity was 2.60 with extremes of 1 and 9, pauciparous patients represented 36.62%, those who had at least one abortion were 23.94%, patients with at least one uterine scar represented 15.5% (Table 3). On admission, 104 patients were in labor, of whom 56.34% had a covering placenta previa and 16.90% had a non-covering placenta previa.

3.4. Para-Clinical Data

The blood count was performed in all patients and showed severe anaemia in 41

Table 1. Distribution of patients according to socio-demographic data.

Socio-demographic data	Number	%
Age group		
15 - 19	12	8.45
20 - 24	30	21.13
25 - 29	39	27.46
30 - 34	28	19.72
35 - 39	23	16.20
40 - 44	10	7.04
Marital status		
Married	108	76.06
Singles	25	17.60
Concubinage	9	6.34
Main occupation		
Housewife	81	57.04
Students	9	6.34
Employees	19	13.38
Shopkeepers	33	23.23
Residence		
Rural area	89	62.68
Urban environment	53	37.32

Table 2. Distribution of patients by reason for admission.

Reason for admission	Number	%
Metrorrhagia of the third trimester of pregnancy	82	57.74
Isolated abdominal and pelvic pain	5	3.52
Metrorrhagia associated withabdomino-pelvic pain in pregnancy	28	19.72
Placenta praevia	10	7.04
Premature rupture of the membranes	8	5.64
Threat of premature delivery	9	6.34

Table 3. Distribution of patients according to obstetrical history.

Obstetrical history	Number	%
Gestity		
Primigest	25	17.61
Paucigest	45	31.69
Multigest	40	28.17
Grand multigest	32	22.53
number of abortions		
0	108	76.06
1	22	15.50
2	8	5.63
3	3	2.11
4	1	0.7
Parity		
Primiparous	30	21.13
Pauciparous	52	36.62
Multiparous	32	22.53
Grand multiparous	28	19.72
Number of previous caesarean sections		
0	120	84.50
1	18	12.68
2	4	2.82

patients (28.87%), moderate anaemia in 41 patients (28.87%) and mild anaemia in 38 patients (26.76%). Obstetrical ultrasound was performedin 38 patients (26.76%) and revealed a central placenta previa in 17 patients (11.97%), marginal in 13 cases (9.15%) and lateral in 8 cases (5.63%).

3.5. Therapeutic Aspects

Blood transfusion was performed in 81 patients (57.04%). The blood products

transfused were red blood cells, iso group and iso rhesus. The delivery route was caesarean section for 133 patients (93.66%) and vaginal delivery for 9 women (6.34%).

3.6. Maternal Prognosis

In 125 cases (88.02%) we recorded complications. There were five (05) cases of postoperative infectious complications (3.52%) including 3 cases (2.11%) of parietal suppurations and 2 cases (1.41%) of endometritis, and 120 cases of anaemia, *i.e.* 84.50%. We noted 4 maternal deaths, *i.e.* a case fatality rate of 2.81%.

3.7. Foetal Prognosis

With regard to foetal prognosis, out of a total of 148 births, we recorded 108 live births (72.97%), with 21.62% very premature; 29.73% moderately premature and 48.65% full term. We recorded 30 stillbirths and 4 newborns who died before 7 days of life, *i.e.* a perinatal mortality rate of 23.94%.

4. Discussion

4.1. Frequency of Placenta Previa

Placenta previa remains a formidable obstetric pathology. Its actual frequency is poorly defined in the literature and is approximately 1/200 pregnancies [4]. This frequency depends on the clinical criteria used, the methods of diagnosis, the time of diagnosis (during pregnancy, during labor or after delivery) and the anatomical varieties selected. In our study we found a frequency of 0.89% higher than those of Ciemensti [5], Sheiner [6], and Ghazli [7] who reported rates of 0.2%, 0.38%, and 0.4% respectively. The referral nature of our service, which allows it to receive serious or complicated cases from peripheral maternity hospitals, partly explains our results.

4.2. Sociodemographic Characteristics

Advanced maternal age is a factor favouring the occurrence of placenta previa. Foote [8] reported that the risk of placenta previa is multiplied by 2 beyond 29 years of age and by 3 beyond 35 years of age according to Nelson [8]; this was the case in our series where we found 42.96% of the patients who were 30 years of age or older.

Housewives represented 57.04% in our study. The probable financial dependence of these women, often associated with the lack of income-generating activity, could make access to obstetrical ultrasound difficult, which allows for early diagnosis of this pathology, which could explain the low rate of ultrasound diagnosis of placenta previa in our study (29.76%).

4.3. Clinical Aspects

The typical profile of the placenta previa candidate is that of a multigester and multiparous woman with a history of abortions and uterine scarring, and with

several miscarriages due to preferential implantation of the egg on the damaged endometrium [9]. In our study, multigestation women represented 50.70%, multiparous women 42.25%, those with at least one previous abortion 23.94% and those with at least one uterine scar 15.40%. Placenta previa (PP) is the main cause of metrorrhagia in the third trimester of pregnancy and this metrorrhagia may worsen during labor due to uterine contractions. In our series, metrorrhagia represented 77.46% of the reasons for admission; this rate could be explained by the high number of patients in labor at admission (73.23%).

Anaemia was severe in 28.87% of patients, moderate in 28.87% and 26.76% of patients had mild anaemia. All these cases of anaemia could be due to bleeding related to the placenta previa; this bleeding, even if minimal, can aggravate anaemia already existing during the pregnancy, explaining the cases of severe anaemia.

4.4. Therapeutic Aspects

Anaemia remains a major public health problem in Burkina because of peripartum hemorrhages that very often occur in women who are already anaemic. Blood transfusion in our context is generally done according to blood loss and the clinical condition of the patient. In our study, blood transfusion was given to 81 patients (57.45%).

The caesarean section rate was 93.66% in our study. It varies from 28.83% to 87% in the literature [10] [11]. Our rate reflects the attitude to reduce the risk of neonatal death in the peri-natal period, because caesarean section saves 2 to 7 times more foetuses than vaginal delivery [12]. For Bhide [13], caesarean section should be systematic in cases of haemorrhagic PP.

4.5. Maternal Prognosis

Maternal morbidity was marked by severe anaemia and parietal suppurations which represented 28.87% and 3.52% respectively. Several authors agree that morbidity is important in PP and even more so after caesarean section [6] [12]. Buambo Bamanga noted a maternal anaemia rate of 8.6% and parietal suppurations of 5.5% [1]. This high rate of anaemia in our study can be explained by the early onset of the first hemorrhages, the recurrence of hemorrhages, and the importance of the quantity of blood lost prepartum in patients who were already anaemic. This anaemia, which is often poorly corrected either by insufficient transfusion or by a lack of blood in our blood banks, predisposes to infectious complications.

In our study, 4 cases of death were recorded, representing a case fatality rate of 2.81%. This rate is higher than those found by Douysset [10] and Ley [11] in France as well as Ibtissam in Algeria [14] who had not recorded any deaths. This difference can be explained by the fact that developed countries have increasingly sophisticated means of survival.

4.6. Foetal Prognosis

Prematurity, due to its numerous complications, is the main cause of perinatal

mortality associated with placenta previa, but also foetal deaths in utero secondary to hemorrhagic shock [15]. In our series, perinatal mortality was 23.94%, which is higher than that reported by Traoré [3], which was 12.70%. This high rate in our study could be due to the proportions of very premature births (21.62%) and still births (21.12%) recorded.

5. Limitations

Due to the retrospective nature of the study, a certain number of variables could not be mentioned, notably the insufficiency or absence of medical information in some cases due to poor record keeping and the lack of ultrasound data in some cases.

6. Conclusion

Placenta previa remains a fairly frequent pathology with a non-negligible case fatality and stillbirth rate in the maternity ward of the Sourô Sanou University Hospital. Early ultrasound diagnosis allows for appropriate monitoring and prevention of all obstetrical complications of this pathology.

Conflicts of Interest

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

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