

Uterine Rupture: Epidemiological Aspects, Etiologies and Maternal-Fetal Prognosis in the Obstetric Gynecology Department of the Donka CHU Conakry National Hospital, Guinea

Boubacar Siddi Diallo^{1*}, Ibrahima Sory Balde², Ibrahima Conte², Mamadou Hady Diallo¹, Ousmane Balde¹, Ibrahima Sylla², Abdourahmane Diallo², Oumou Hawa Bah¹, Loua Avit¹, Telly Sy², Namory Keita¹

¹University Department of Gynecology-Obstetrics, Donka National Hospital, Conakry, Guinea

²University Department of Gynecology-Obstetrics, Ignace Deen National Hospital, Conakry, Guinea

Email: *tounty1@yahoo.fr, baldeisory@yahoo.fr, conteib1976@gmail.com, hadydiallo@yahoo.fr, baldeousmane04@gmail.com, dribra62@yahoo.fr, adiallo69gn@yahoo.fr, camarahawa2002@gmail.com, a.loua40@gmail.com, sytelly@yahoo.fr, namoryk2010@yahoo.fr

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Abstract

Objectives: The objectives of this work were to calculate the frequency of the uterine rupture, to describe the epidemiological profile, to identify the etiologies and to establish the maternal prognosis and foetal. **Methodology:** It was about a descriptive survey with compilation of the data in two phases: a retrospective spreading on one period of 6 years and the other forecasting of 1 one year achieved to the service of Obstetric Gynecology of the hospital National Donka, Fallen from Conakry, Guinea. **Results:** We recorded 24.030 childbirths of which 188 cases of uterine rupture either a frequency of 0.78, which represents an uterine rupture for 128 childbirths. The epidemiological profile was the one of a woman of 24 to 28 years (31.91%), housewives (69.14%), without prenatal follow-up (47.87%), big multipare (37.76%) and évacuées (78.78%). The motives of consultation have been dominated by the hémorragie (95.74%). The rupture was of transverse type in the majority of the cas (63.82%). The hysterorraphy was the most performed surgical procedure which is 85.10% followed by the total sub hysterectomy in 10.63%. The newborns of birth weight superior or equal to 4000 g represent 25.53%. The maternal morbidity has been dominated by the anemia of the postpartum (60%). We recorded a rate of maternal létalité of 12.76%. The maternal deaths were due to the hemorrhage in 78.57%. The living newborns endured a respiratory distress in 9.57% and those stillborn represent 87.23%. The etiologies of uterine rupture were dominated by fetal-pelvic disproportions 48.93% fol-

lowed by an iatrogenic uterine rupture 22.33%. **Conclusion:** The reduction of this uterine rupture rate would pass by the recentered prenatal consultation offered, the one of obstetric cares and complete néonataux of emergency, the discount to level of the beneficiaries of the basic structures so that they can discover the cases in time susceptible to drag a rupture to evacuate better in time and the promptness in the hold in charge since the admission of the emergencies in the structures of superior level.

Keywords

Uterine Rupture, Etiologie, Prognosis

1. Introduction

The uterine rupture is an obstetric emergency defined like a solution of surgical, interesting continuity one or all tunics of the uterus, structural on the body and/or the lower segment of the uterus to the exclusion of the rips limited to the collar, the wounds by abdominal traumatism and perforations by abortive manœuvres [1]. Several studies done in the world were permitted to note today that in the countries highly médicalisés, the uterine rupture became exceptional especially occurring on the uteruses weakened by scars of previous interventions [2]. On the other hand in Africa Sub-Of the Sahara, the rupture of healthy uterus stays the main met anatomo-clinical shape; most occurring at the parturientes presenting a childbirth dystocia [3]. Indeed, in spite of the important progress recorded in the setting of the program of reduction of mortality and morbidity materno-foetale, the women in the underequipped countries continue to pay a heavy tribe to the complications bound to pregnancy and the childbirth. Among these complications, uterine rupture is one of the most serious since it immediately brings the maternal and fetal vital prognosis into interaction [4]. The frequency of the uterine rupture is variable from a country to the other: to the United States, his/her/its impact varies between 1/1000 and 1/1500 accouchements [5]. In France, it is located between 1/1000 and 1/1200 [6]. To Morocco, a hospitable survey achieved in 3 years revealed a frequency of 0.3% [7]. The frequency of the uterine rupture in Africa Sub-Of the Sahara varies from 0.89% to Mali to 4.04% to Niger [8] [9]. In Guinea, a hospitable survey achieved in Conakry gives like frequency 0.98% (36 uterine ruptures for 3663 childbirths) [10]. The prognosis of this affection is serious, 13% to 26% of maternal mortality and 75% to 90% of mortality foetale in the countries underdeveloped [9].

The objectives of this work were to calculate the frequency of the uterine rupture, to describe the epidemiological profile, to identify the etiologies and to establish the maternal prognosis and foetal.

2. Methodology

It was about a descriptive survey with compilation of the data in two phases: a

retrospective spreading on one period of 6 years and the other forecasting of one year achieved to the service of Obstetric Gynecology of the hospital National Donka, Fallen from Conakry.

Have been included in this survey all cases of uterine ruptures evacuated in the service or the uterine ruptures occurred during the work of childbirth in the same service.

Have been excluded all cases of uterine ruptures intervening and taken in charge outside of the service and admitted for the complications following these holds in charge.

The studied variables were epidemiological (maternal age, prenatal follow-up, gestité, parity, profession, the level of instruction, the statute matrimonial), cliniques (mode of admission, state of the uterus, motive of consultation, surgical gestures, weight of birth, maternal morbidity, maternal létalité, reasons of maternal death, létalité foetale) et étiologiques.

3. Results

Frequency: We recorded 24.030 childbirths of which 188 cases of uterine rupture either a frequency of 0.78, what represents an uterine rupture for 128 childbirths.

3.1. Epidemiology

- Age: The age group of 24 to 28 years is the more concerned 31.91%. The middle age was of 28 years with extremes of 14 and 42 years
- Profession: The housewives were more concerned with 69.14%.
- Prenatal follow-up: The patients without prenatal follow-up represented 47.87%.
- Parity: The big multiparous with 37.76% were the more touched. The middle parity was of 8.95.

3.2. Clinic

- Fashion of admission: The evacuees constituted 78.78% of the received patients.
- Circumstance of discovery: The hemorrhages constituted the main circumstance of discovery in case of cicatricial uterus either 95.74% against 88% on non cicatricial uterus.
- Aspect of the uterus: The features of rupture were Transverse in 63.82% of the cases.
- Surgical gestures: The hysterorrhaphie was the surgical gesture the more practiced either 85.10% follow-up of the hysterectomy total sub in 10.63%.
- Weight of birth: The newborns of birth weight superior or equal to 4000 g represent 25.53%.
- Maternal morbidity: The maternal morbidity has been dominated by the anemia of the postpartum (60%).

- Maternal Létalité: We recorded a rate of maternal létalité of 12.76%.
- Reasons of maternal death: The maternal deaths were due to the hemorrhage in 78.57%.
- Morbidity foétale: In our set, 18 newborns endured a respiratory distress is 9.57% of the cases among which 6 survived after a resuscitation.
- Létalité foétale: The 164 newborns were stillborns is 87.23%.

3.3. Etiologies

The etiologies: The etiologies of uterine rupture were dominated by fetal-pelvic disproportions 48.93% followed by an iatrogenic uterine rupture 22.33%.

4. Discussion

Frequency: We recorded 24.030 childbirths of which 188 cases of uterine rupture either a frequency of 0.78. What represents an uterine rupture for 128 childbirths. This result is superimposable to the one gotten by SEPOU A. and COLL. is a frequency of 0.6% in 1997 in Centrafrique [11]. On the other hand, it is lower than that obtained by Dolo A. and collaborators in Mali in 1998 and Diallo F.B. and collaborators in Guinea in 1999 which reported respectively 0.89% and 0.98% [8] [10]. The frequency of the uterine rupture would explain itself by the multiplicity of the houses of childbirth holdings by nonqualified beneficiaries, using some ocytociques without indication and practicing of the uterine expressions inopportune having for corollary the uterine rupture.

4.1. Epidemiology

- Age: The age group of 24 to 28 years is the more concerned 31.91%. The middle age was of 28 years with extremes of 14 and 42 years. GUEYE S.M.K and COLL. returned a middle age of 30 years with extremes of 17 to 45 years in 1996 to Senegal [12].
- Profession: The housewives were the more concerned with 69.14%. This result is lower to the one returned by GUEYE S.M.K and COLL. is 90% [12]. The predominance of the housewives in our set would explain itself by the fact that they are the most numerous in the feminine population.
- Prenatal follow-up: The patients without prenatal follow-up represented 47.87%. This frequency would be due to the poverty of the population, the insufficiency of information on the importance of the CPN, the refusal or the carelessness of the gestantes to present itself/themselves regularly to the CPN, the insufficiency or the absence of a personal compétant for the realization of CPN of quality in the peripheral centers and the remoteness of the health structures.
- Parity: The big multiparous with 37.76% were more touched. The middle parity was of 8.95.

This result is superimposable in the one of GUEYE S.M.K and COLL. to Senegal that returns 40% of uterine rupture at the multiparous with a middle pari-

ty of 5 in 1996 [12].

4.2. Clinic

- Fashion of admission: The evacuees constituted 78.78% of the received patients. This result agrees with the one of LANKOANDE J. and COLL. who returns 78.2% of evacuees in 1995 to Burkina [6]. It could explain itself by the fact that most evacuees stayed a long time little in houses of childbirth holdings by a staff or non qualified, underestimating the dystocies of the childbirth work and managing some ocytociques to these parturientes and don't decide their evacuations that when they exhausted all tentatives to them carried, that drag the uterine rupture often.
- Circumstance of discovery: The hemorrhages constituted the main circumstance of discovery in case of cicatricial uterus either 95.74% against 88% on non cicatricial uterus. This result is close to the one of KHABOUZ S. and COLL. 78% found in Morocco in 1999 [13].
- Aspect of the uterus: The features of rupture were Transverse in 63.82% of the cases. The features of rupture were transverse in 63.82%, longitudinal in 25.53% and extended to the organs of neighborhood in 10.63% of the cases. In the literature the authors return that the journey of the uterine rupture is in general transverse, almost always toward the left side, because of the dextrotorsion of the uterus [4].
- Surgical gestures: The hystérorraphie was the surgical gesture the more practiced either 85.10% follow-up of the hysterectomy total sub in 10.63%. This result of the hystérorraphie is similar to those found by DIALLO F.B and COLL. in Guinea and KHABOUZ S. and COLL. to Morocco with respectively 81.2% and 80%.

These gestures are function of some parameters as age, the parity, the number of living child but also the severity of the lesions [14].

Weight of birth: The newborns of birth weight superior or equal to 4000 g represent 25.53%. This result is lower to the one found by GUEYE S.M.K and COLL. in Senegal [12] soit 64%. It is evident from our survey that the macrosomie is a factor of non negligible risk of uterine rupture, inciting to the prudence in the decision making of the way of childbirth of these macrosomes.

- Maternal morbidity: The maternal morbidity has been dominated by the anemia of the postpartum (60%) follow-up of the infection post operative 16.7%. This result is lower to those found by GUEYE S.M.K and COLL. et KHABOUZ S. and COLL. with respectively 2.27% of case of anemia and 11.64% of septicemia [12] [13].

This rate raised of anemia in our set would explain itself by the chronic anemia at the pregnant women and the genital hemorrhage at the women having accused a delay of evacuation and a delay of hold in charge. However the infection post-operative would be bound to the organism weakened by anemia, the uterine rupture, to the prolonged work, the conditions of realization of intervention and to a non adapted antibiothérapie.

- Maternal Létalité: We recorded a rate of maternal létalité of 12.76%. This rate is intermediate between the one found by DIALLO F.B and COLL. in Guinea and ABASSI H. and COLL. in Morocco with respectively 13.88% and 2.4% [10] [15].
- Reasons of maternal death: The maternal deaths were had to in the majority to the hemorrhage 78.57% consistent of the infection postoperative 21.42%. In the literature African; the létalité varies from 10% to 35% [6] [8] [12].
- Morbidity foetale: In our set, 18 newborns who endured a respiratory distress are 9.57% of the cases among which 6 survived after a resuscitation. It is largely to the prolonged childbirth work at the evacuated women, the uterine rupture and to the delay in the hold in charge.
- Létalité foetale: The 164 other newborns were stillborns is 87.23%. This result is similar to those found by DIALLO F.B. and COLL. in Guinea and DOLO A. and COLL. in Mali with respectively 83.3% and 90.2% [8] [10]. On the other hand, he/it is lower to the one returned by HELLEN R. and COLL. in USA is 6.57% of death foetaux [16]. In the literature, the mortality foetale varies from 72% to 100% [1] [17]. The prognosis foetal of the uterine rupture is very dark. This report agrees to those of the African literature in which the heavy tribute paid by the foetus stays a constant [7].
- The etiologies: The etiologies of the uterine ruptures were dominated by the foeto-pelvic disproportions 48.93% consistent of the ruptures uterine iatrogènes 22.33%. This result is superior to those returned by DIALLO F.B. and COLL. in Guinea and DUVERGER V. and COLL. with respectively 16.67% and 7.69% of foeto-pelvic disproportion [10] [18]. It is necessary to note that the uterine rupture provoked by the foeto-pelvic disproportion on healthy uterus is more frequent than the one intervening on a cicatricial uterus. It is due to the fact that a lot of precautions are taken in the childbirths on cicatricial uterus.

5. Conclusion

The reduction of this uterine rupture rate would pass by the recentered prenatal consultation offer, the one of obstetric cares and complete néonataux of emergency, the discount to level of the beneficiaries of the basic structures so that they can discover the cases in time susceptible to drag a rupture to evacuate better in time and the promptness in the hold in charge since the admission of the emergencies in the structures of superior level.

Conflicts of Interest

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

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