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The Problematics of Transferred Parturient Women in Guinean Urban Areas: The Case of the Donka Maternity Ward at the University Hospital Centre (Chu) Conakry

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Abstract

Objectives: To describe the socio-demographic aspects of transferred parturient women; To identify the means of transport used by the evacuated parturient women to the Donka maternity ward at the University Hospital of Conakry; To describe the difficulties met; And to assess maternal and fetal prognosis. **Methodology:** It consisted of a prospective study over a period of 6 months from 01/02 to 31/07/2018. All patients transferred to the maternity ward of the Donka National Hospital of Conakry University Hospital. **Results:** The frequency of obstetric transfers was 13.79%. The epidemiological profile was that of a parturient woman of an average age of 25.7 years, married, and housewife, unschooled, who was on her first pregnancy and from the city of Conakry. The average distance covered was 16 km with extremes of 3 and 50 km. The transfer to the referral maternity clinic was not medicalized in 94% of cases. The venous route was not taken in 96% of cases. The parturient was not escorted by a health worker in 98% of cases. Bleeding was the most frequent reason for evacuation, followed by acute fetal sufferings. The average number of prenatal consultation was 2 with extremes of 0 and 9. The average length of stay was 3.6 days with extremes of 1 and 28 days. The majority of transferred women had a full-term pregnancy. The Cesarean section was 79.4%. The Retro placental hematoma was the most common complication found and was 29.4%. The counter-reference was not made in 97.79%. We recorded 8 maternal deaths, for a lethality rate of 1.77%. Possible interventions to reduce the dramatic situation of obstetric evacuations require

first of all the decentralization of health care structures capable of performing a cesarean section. This approach should aim to create medical centers with a surgical antenna in all municipalities. These decentralized units would reduce the delay in case management and thus, limit the number of complications.

Keywords

Transfer, Complication, Conakry University Hospital

1. Introduction

Of all the human development indicators, maternal and infant mortality rates reflect the widest disparities between industrialized and developing countries [1].

Indeed, every minute in the world, 380 women start a pregnancy, 110 suffer from a complication and one dies from a complication related to pregnancy or to childbirth [2] [3].

Regarding this maternal mortality the followings have been described:

- direct causes, such as bleeding, infection or high blood pressure and its complications;
- indirect causes such as malaria, anemia or HIV infection (human immunodeficiency virus);
- contributing factors such as delays in making the decision to go to hospital for consultation, delays in admission to the appropriate health facility, and delays in access to patient management [1] [4].

In sub-Saharan Africa, the situation is worrying because the risk of death is 1/13 compared to 1/4100 in industrialized countries [5]. In Guinea, this mortality was estimated at 679 per 100,000 live births in 2015 [6].

Among the determinants of this mortality, obstetric referrals, which account for more than 20% of pregnancy-related morbidity cases, hold an important place [7].

In the study conducted by Baldé I S *et al.* at Ignace Deen National Hospital, intrapartum obstetric transfers accounted for 7.05% of admissions in one year [8].

The referral system allows populations to have access to health care that is not likely to be provided at the local level and to manage certain complications that occur in emergency situations. Medical evacuation means a transfer made in an emergency context. This is the case for emergency obstetric and neonatal care [9].

The objectives of this study were to:

- Describe the socio-demographic aspects of transferred parturient women;
- Identify the means of transport used by the transferred women in the Donka maternity ward of the University Hospital of Conakry;
- Describe the difficulties met;
- Assess maternal and fetal prognosis.

2. Patients and Method

The study was carried out at the maternity ward of the Donka National Hospital of the Conakry University Hospital, a level III Maternity Hospital (which is the top). This was a cross-cutting descriptive prospective study that ran from February 1 to July 31, 2018, *i.e.* a six-month period. The study population consisted of all transferred patients.

Only patients transferred for obstetrical reasons were included in this study.

We excluded postpartum transferred patients from this study. We have exhaustively identified all cases of transfers to the maternity ward. Data were collected as soon as the patients arrived. The supports used were the survey form, the obstetrical file and the obstetrical evacuation form. For each patient, we studied the socio-demographic and clinical characteristics, the means of transport used, the difficulties encountered and the maternal-fetal prognosis.

Data entry, processing and analysis were carried out using Word, Excel and Epi info version 7 software.

The informed consent of patients had been obtained.

We had obtained the prior approval of the national ethics committee.

The absence of liaison sheets making it impossible to clarify the success of events before the evacuation was the main difficulty and limitation of this study.

3. Results

3.1. Frequency of Obstetric Transfers

During the study period we recorded 452 obstetric evacuations out of a total of 3276 obstetric admissions, *i.e.* a frequency of 13.79%.

3.2. Socio-Demographic Features

3.2.1. Age

The average age of the patients was 25.7 years, with extremes of 15 and 44 years.

The 15 - 24 age group was the most affected, with 246 patients *i.e.* 54.4%.

3.2.2. Marital Status

The number of patients with a marital life was 420, *i.e.* 92.92%.

3.2.3. Occupation

There were 286 housewives *i.e.* 64.27%. Students represented 17.30%, dressmakers 14.61% and civil servants 3.82%.

3.2.4. Educational Level

The number of out-of-school patients was 245 *i.e.* 54.2%. Patients who completed primary education were 95 *i.e.* 21%, those who completed secondary education were 75 patients *i.e.* 16.6% and patients who had completed higher education were 37 *i.e.* 8.2%.

3.2.5. Gesture and Parity

Primigravida were the most represented with 156 *i.e.* 34.5%, followed by pauci-

gravida with 183 *i.e.* 40.5%. Multi-gestures with a total number of 113 represented 25%. The average parity was 5.8 with extremes of 1 and 11 deliveries.

3.2.6. Places Patients Came from

We recorded 150 patients who came from health centers in Conakry city (32.2%) and 140 were from municipality medical centers in Conakry city (31%). These were patients transferred from private clinics in the city of Conakry in 96 cases *i.e.* 21.2%. In 66 cases *i.e.* 14.6%, they were transferred from delivery houses.

3.3. Evacuation Data

3.3.1. Distance Travelled

Table 1 represents the distribution of transferred parturient women by distance travelled.

The average distance covered was 16 km with extremes of 3 and 50 km. More than half of our patients travelled more than 20 km. Those who came from less than 10 km represented only 6.64% of the evacuated parturient women.

3.3.2. Means of Transport and Organization of the Transfer

Transportation to the referral maternity clinic was not medicalized in 94% of cases and was provided by public transport or personal vehicles. Only 6% of our patients were transferred by ambulance.

The venous route was not taken in 96% of cases.

The mother was not accompanied by a health worker in 98% of cases.

For ten patients out of 452 (2.21%), the health care provider had informed the Hospital prior to the transfer. Communication was made by telephone in 100% of cases.

More than half of our patients 249 (55.1%) had stayed more than 24 hours in their first medical facility. The evacuation time between the evacuation decision and the arrival at the Donka maternity ward of CHU CONAKRY was at least 2 hours for 58.5% of the transferred patients.

3.3.3. Management before Medical Transfer

Only 20 patients out of 452 (4.42%) had a venous approach. The solute used was: isotonic glucose serum in 6 cases (30%), Ringer Lactate in 9 cases (45%), isotonic salt serum in 5 cases (25%). It was noted that no patients received macromolecules or blood transfusion prior to their transfer.

Table 1. Distribution of transferred parturient women by distance travelled.

Distance in km	Number	Percentage (%)
<10	30	6.64
10 - 20	190	42.04
>20	232	51.32
Total	452	100

3.4. Reasons for Medical Transfer

Hemorrhages were the most frequent reason for evacuation (21.6%) followed by acute fetal suffering (18.4%).

3.5. Prenatal Consultation (PNC)

More than a quarter of our patients (26.8%) had more than 4 prenatal consultations (PNC), the average number of ANCs was 2 with extremes of 0 and 9.

3.6. Time Limit for Management at Admission

Management was carried out on average within 30 minutes after admission with extremes of 15 and 190 minutes. The average length of stay was 3.6 days with extremes of 1 and 28 days.

3.7. Pregnancy Term on Admission

The majority of transferred pregnant women (94%) had a full-term pregnancy whose age range varied from 37 to 42 SA, 4% had a pregnancy ranging from 22 to 36 SA and only 2% had a pregnancy between 42 SA and over.

3.8. The Diagnosis at Admission Is Shown in Table 2

Mode of Delivery of Patients

Caesarean section involved 359 patients, *i.e.* rate of 79.4%, and 93 patients delivered vaginally, 20.6%.

3.9. Maternal Prognosis

Retro placental hematoma was the most common complication and involved 115 patients *i.e.* 25.4% followed by placenta previa with 66 patients *i.e.* 14.6%, uterine rupture 64 patients *i.e.* 14.1%, and eclampsia 54 patients *i.e.* 11.9%. Bleeding accounted for 54.1%;

We recorded 8 maternal deaths, for a lethality rate of 1.77%.

3.10. Fetal Prognoses

Per partum fetal death was the most frequently encountered fetal complication:

Table 2. Distribution according to diagnosis at admission.

Diagnosis	Number	Percentage (%)
(Uterine rupture)	64	14.15
(Retroplacental hematoma)	**115**	**25.44**
(Placenta prævia)	66	14.6
Eclampsia	54	11.94
Pelvis Abnormalities	83	18.36
(Acute fetal suffering)	60	13.27
Total	**452**	**100**

133 cases *i.e.* 29.4% and hypotrophy involved 25 newborns *i.e.* 5.6%. Normal newborns accounted for 59.7%.

3.11. The Counter-Reference

The counter-reference was not performed in 442 patients *i.e.* 97.79% and only 10 patients received a counter-reference *i.e.* 2.21%. The means used were a letter given to the patient and a telephone number to the referring provider.

4. Discussion

4.1. Frequency

Our frequency of 13.8% is significantly lower than the data reported by Ouattara A in Burkina Fasso (43%) [10] and Cissé in Senegal (46.7%) [11]. However, Diarra Nama in Côte d'Ivoire [12] and Coulibaly [13] in Mali had 10.4% and 7.9% respectively.

4.2. Socio-Demographic Aspects

The average age of the patients was 25.7 years with extremes of 15 and 44 years. The 15 - 24 age group was the most affected (54.4%). Ouattara A *et al.* [10] reported an average age of 26.11 years with extremes of 13 and 49 years

Thiam O *et al.* reported an average age of 26.6 years [5] with extremes of 15 and 47 years, the 20 - 24 age group being the most affected. Tchaou *et al.* reported an average age of 26.7 ± 6.2 years with extremes of 15 and 45 years [14].

With regard to marital status, our data are close to those of Ouattara and Diarra Nama, who reported 89.8% and 95.5% of married women respectively [10] [12].

With regard to the profession, our result is close to that reported by Tchaou B A *et al.* in Benin, who found 40.4% of housewives [14]. Ouattara A *et al.* reported 74.4% in Burkina Fasso [10].

Regarding the level of education our result is different from that found by Sepou A *et al.* in Bangui who reported that 56.1% of women had a primary educational level [15]. This indicates the high level of illiteracy in our country [6].

The average gestiture was 2.86 with extremes of 1 and 12. Thiam *et al.* reported an average gestiture of 3.8 [5]. Primigrae were the most affected in our series (34.5%) and this trend was confirmed by Diarra Nama *et al.* who reported 27.7% among primigravida [12] For Tchaou B A *et al.* the average gestiture was 3.21 ± 2.16 [14].

The average parity was 1.54 with extremes of 1 and 11, nulliparous and primiparous women were concerned in our series with 32.5% and 23.2% respectively. Thiam O *et al.* reported an average parity of 2.7 [5]. For Tchaou B A *et al.* the average parity was 2.00 ± 2.13 [14].

For patients place of origin our result is close to that reported by Ouattara A *et al.* who found that 96% of their patients were evacuated from the city of Ouagadougou and only 4% were from the neighbouring provinces of the city [10].

With regard to evacuation data, the average distance covered was 16 km with extremes of 3 and 50 km. Serious maternal and fetal complications and deaths were observed in the majority of cases among patients received after having covered a distance of more than 20 km. This result corroborates the SEPOU data [16]. Transportation to the referral maternity clinic was not medicalized in 94% of cases and only 6% of our patients were evacuated by an ambulance. Thiam *et al.* reported in their study that evacuation was provided by ambulance in 69.2%, by personal transportmeans in 28.9% and public transport in 1.5% [5]. 26.1% of evacuations in the Central African Republic are provided by ambulance [16].

Only twenty of our patients out of 452 (4.42%) had a venous approach. In the study conducted by Thiam *et al.* 61% of evacuated patients received a venous approach [5].

These data show that a lot of effort must be made by medical authorities to equip health centers with ambulances. Thus, to improve the quality of health coverage in urban areas, the creation of functional surgical blocks, the training and the provision of refresher courses for health personnel appear to be a priority.

4.3. Clinical Aspect

Hemorrhages were the most frequent reason for obstetric evacuation 54.2%. For Thiam O *et al.* the motives were dominated by dystocias 37.3% [5]. Sepou *et al.* reported maternal exhaustion as the main reason for transfer [15]. For Diarra Nama *et al.*, dystocias were the main reason for transfer [12].

The average time to provide medical management in our case was 30 minutes. This average delay was 28.8 minutes in the Thiam *et al.* cases with extremes of 10 and 180 minutes [5].

About the pregnancy term at admission, the majority of our patients were evacuated at full pregnancy. For Tchaou B A *et al.* the average gestational age was 33.3 ± 9.3 SA (amenorrhea week) with extremes of 6 and 43 SA [14].

4.4. Diagnosis at Admission

Retroplacental hematoma was the most common diagnosis encountered. For Diarra Nama *et al.*, the main diagnosis at admission was dominated by dystocia [12]. However, in most cases the reason for transfer did not match the diagnosis at admission. This could be explained by the low professional level of agents providing initial medical management. This fact has been noted by some authors [12] [15].

4.5. Prenatal Consultation

The frequency of prenatal follow-up in our case is lower than those reported by Touré in Côte d'Ivoire and Diallo in Senegal, who found less than 3 PNCs in 78.1% and 74.4% respectively [17] [18].

Akpadza *et al.* in Togo reported that the frequency of obstetric evacuations tends to decrease as the number of PNCs increases [19].

4.6. Mode of Delivery

The cesarean section rate was 79.4% in our case. It was 33.2% for Thiam O *et al.*, 48% for Cissé *et al.* in Senegal and 18.5% for Soltani in Tunisia [5] [20] [21]. Our high rate would be explained by the severity of complications at admission (hemorrhage, acute fetal suffering).

4.7. Maternal Prognosis

Maternal complications were dominated by third trimester hemorrhages with a total of 245 cases *i.e.* More than half 64.1%, which is followed by eclampsia 54 cases *i.e.* 11.9%. Tchaou A B *et al.* reported 32.1% dystocia, 21.7% hemorrhagic emergencies and 16.4% hypertensive emergencies [14].

Our maternal lethality is lower than those reported by Thiam O, Ouattara A and Sepou A who found 2%, 3.9% and 6.9% respectively [5] [10] [15]. The difference between our figures and those of these authors in the work context could be explained by the positive impact of the subsidy granted to emergency obstetric care by government authorities.

4.8. Fetal Prognosis

Fetal complications were dominated by per partum fetal deaths 133 cases *i.e.* 29.4% which is followed by growth retardation 25 cases *i.e.* 5.6% and prematurity 24 cases *i.e.* 5.3%. Ouattara A *et al.* reported a frequency of 18.85% of neonatal deaths [10].

Diallo F.B *et al.* found in their study that the incidence of stillbirths among children born to evacuated mothers is six times higher than among those who were not transferred [22].

Dolo A had observed that the risk of mortinatality was four times higher in evacuated patients than in referred patients and twice as high as in self-referred patients [23].

4.9. The Second-Reference

The counter-referral was performed in only 2.21% of our patients.

For Thiam O *et al.* this rate was 97.3% and the means used were a letter given to the patient and a telephone number to the referring provider: a letter was used in 76.8% and the telephone in 15.6% of patients [5].

5. Conclusions

Delays in evacuations, the poor organization of the referral/evacuation system, the poor quality of our transport infrastructure, the use of unsuitable vehicles, the unavailability of certain emergency medicines and the under-equipment at reception facilities are real time bombs in terms of maternal mortality.

The training of peripheral health personnel on the recognition of risk factors, the education of women on the risks faced by them and their children, the improvement of logistical means of evacuation, the creation of an emergency ob-

stetric medical reception unit in urban areas, the creation of functional surgical relay centers, the implementation of an effective information, monitoring and communication system would undoubtedly reduce the importance of this scourge, which delays and alienates efforts to achieve the objectives of a sustainable development.

Conflicts of Interest

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

References

[1] UNDP (2006) Human Development Report 2006. Economica, Paris, 251.

[2] WHO (1994) Information on Activities around the World. Safe Motherhood.

[3] WHO (2010) Women's Health and Safe Motherhood: The Role of Obstetricians and Gynaecologists. *Report of a Pre-Conference Workshop Organized by the Joint Ad Hoc Group WHO/FIGO*, Rio de Janeiro, 19-20 October 2008, SMI34 /PF OMS Geneva.

[4] Thiero, M. (2003) Emergency Medical Evacuations in Obstetrics at l'Hôpital Gabriel Touré. About 160 Cases. Newsletter of the Network Santé Sud.

[5] Thiam, O., Cissé, M.L., Mbaye, M., Niang, M.M., Gueye, M., Diouf, A.A., Dièye, S. and Moreau, J.C. (2013) The Problematics of Parturient Women Transfered to Rural Senegal: Example of the Hospital Centre of NDIOUM. *Review of the African and Malagasy Council for Higher Education*, **1**, 51-56

[6] Demographic and Health Survey and Multiple Indicators Survey (EDS-MICS-IV), Guinea (2015).

[7] Rooney, C. (2002) Prenatal and Maternal Health: WHO Effectiveness Study, Maternal Health and Safe Motherhood Programme. WHO, MSM/92, 72 p.

[8] Balde, I.S., Diallo, F.B., Diallo, Y., Diallo, A., Diallo, M.H., Camara, M.K., *et al.* (2011) Intrapartum Obstetric Evacuations: Socio-Demographic, Clinical and Prognostic Aspects in Conakry, Guinea. *MedTrop*, **71**, 628-629.

[9] African Society of Obstetricians and Gynecologists (2010) Recommendations for the Clinical Practice of Emergency Obstetric and Neonatal Care in Africa. Service Provider's Guide, 2nd Edition, OMS pour Afrique, 148.

[10] Ouattara, A., Ouedraogo, C.M., Ouedraogo, A. and Lankoande, J. (2015) Obstetric Referrals and Evacuations in the Context of Subsidizing Emergency Obstetric and Neonatal Care: Epidemiological, Clinical and Prognostic Aspects over a Period of 36 Months at the Yalgado Ouagadougou University Hospital. *Tropical Medicine and Health*, **25**, 403-407.

[11] Cissé, M.L., Raad, B., Diouf, A., Wade, F. and Moreau, J.C. (2010) Assessment of Obstetric Evacuations at Kolda Hospital. *Médecine d'Afrique Noire*, 37-43.

[12] Diarra Nama, A.J., Angbo, O., Koffi, M.N., Koffi, M.K., Yao, C. and Welffens Ekra, C. (1999) Morbidity and Mortality Related to Obstetric Transfers in the Bouaflé Health District of Côte d'Ivoire. *Santé Publique*, **11**, 193-201.

[13] Coulibaly, A.B. (2004) Gyneco-Obstetrical Referral/Evacuation to the Reference Health Centre in Commune V of the Bamako District. *Mali Médical*, **3**, 7-11.

[14] Tchaou, B.A., Hounkponou, N.F.M., Kabibou, S. and Eugène, Z.M.C. (2015) Obstetrical Emergencies at PARAKOU University Hospital in Benin: Clinical, Therapeu-

tic and Evolutionary Aspects. *European Scientific Journal*, **11**, 260-272.

[15] Sepou, A., Goddot, M., Ngbale, R., Gaunefet, C.E., Domande-Modanga, Z., Fandema, E., *et al.* (2009) Evolution of the Frequency and Problems Related to Medical Evacuations to the Gynaecology and Obstetrics Department of the Bangui Community Hospital. *Clinics in Mother and Child Health*, **6**, 1007-1012.

[16] Sepou, A., Yanga, M.C., Nguembi, E., *et al.* (2003) Epidemiological and Clinical Aspects of 116 Cases of EP at Bangui Community Hospital. *Médecine d'Afrique Noire*, **50**, 405-411.

[17] Toure, C.K., Aïssi, G.A., Tano, N., Kouyaté, S., Guié, P. and Doumbia, Y. (1995) Premature Detachment of the Normally Inserted Placenta, Fetal-Maternal Prognosis. About 1,062 Cases Collected at the Obstetrical Clinic at Treichville University Hospital. *Médecine d'Afrique Noire*, **42**, 540-547.

[18] Diallo, D., Ndiaye, P.A., Diouf, A., Faye, E.O., Traoré, B. and Diadhiou, F. (1997) Retroplacental Hematoma at the University Hospital of Dakar. *Dakar Medical*, **42**, 59-62.

[19] Akpadza, K., Baeta, S., Neglo, Y., Tete, V. and Hodonou, A.K.S. (1996) Retroplacentalhematoma (HRP) at the Clinique de Gynécologie-Obstétrique du CHU Tokoin Lomé (Togo) from 1988 to 1992. *Médecine d'Afrique Noire*, **43**, 342-347.

[20] Cissé, M.L., Moreau, J.C., Faye, E.H.O., Cissé, L. and TerolbeI, D.F. (2002) Cost of Evacuating Women Who Have Given Birth at Aristide Le Dantec University Hospital in Dakar. *Journal of the African Society of Gynecology and Obstetrics*, **1**, 23-27.

[21] Soltani, M.S., Bechir, A. and Souissim, M.B. (1991) Profile of Pregnancies Referred to the Tunisian Sahel. *Revue Francaise de Gynecologie et d Obstetrique*, **86**, 511-513.

[22] Diallo, F.B., Diallo, A.B., Diallo, Y., *et al.* (1998) Maternal Mortality and Lifestyle Risk Factors. *Médecine d'Afrique Noire*, **45**, 83-86.

[23] Dolo, A., Traoré, M., Diarra, I. and Katile, M. (2001) Risk Factors for Stillbirths in the Gynaecology-Obstetrics Department of the Point G Hospital in Bamako. *Journal of the African Society of Gynecology and Obstetrics*, **1**, 26-31.