

In Utero Fetal Death: Epidemiological and Management Aspects at the Sylvanus Olympio University Hospital (CHU SO) in Lomé

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Abstract

Introduction: The occurrence of intrauterine fetal death (IUFD) is a traumatic event not only for the mother and her family but also for the obstetric team. IUFD is a common event. Objective: the aim of our study is to describe the epidemiological, diagnostic and management aspects of IUFD at the Sylvanus Olympio University Teaching Hospital (CHU SO), Lomé. **Methodology:** It was a descriptive cross-sectional study with retrospective data collection process that concerned cases of IUFD from January 1st 2023 to December 31, 2023 at CHU SO. **Results:** The hospital prevalence of IUFD was 2.43%. The mean age of the mothers was 30.6 ± 6 years. The Multigestures represented 32.52% and primiparous women represented 29.72%. Pregnant women were referred in 88.11% of cases; 47.55% had done at least 4 antenatal care visits and 4.20% had a history of IUFD. The etiological factors of IUFD were preeclampsia in 28.67% of cases, retroplacental hematoma in 28.67% and premature rupture of membranes in 4.55% of cases. Misoprostol was used for artificial induction of labor in 57.14% of cases and the delivery route was vaginal in 75.87% of cases. **Conclusion:** The frequency of IUFD is high and its reduction remains a challenge in low-income countries.

Keywords

In Utero Fetal Death, Fetal Death, Togo

1. Introduction

The occurrence of intrauterine fetal death (IUFD) is a traumatic event not only

for the mother and her family but also for the obstetric team [1]. According to the World Health Organization (WHO), IUFD is defined as the death of a fetus in the uterus beyond 22 weeks of amenorrhea (WA) or weighing more than 500 g [2]. Although the diagnosis of IUFD is relatively easy, its causes, as well as its management, especially its psychological impact, remain a concern for the obstetrician. It is a common event, its incidence is estimated between 4 and 12 per 1000 births in developed countries, but it can reach 30 per 1000 births in developing countries [1]. In 2014, Quibel *et al.* reported a global prevalence of 2% of IUFD [3]. Andriamandimbison *et al.* found a frequency of 4.41‰ in France [4]. A prevalence of 13.98% in 2015 and 4% in 2022 was found in the Democratic Republic of Congo (DRC) respectively by Kangulu *et al.* and Mpoy *et al.* [1] [5]. In 2016, Diallo *et al.* reported a prevalence of 6.95% in Guinea Conakry [6]. In 2018, Douaguibe *et al.* reported a frequency of 3.64% in Togo [7]. We continue to receive cases of IUFD almost daily whose management until delivery is often delicate. We therefore initiated this study in order to review the subject. The general objective is to describe the epidemiological, diagnostic aspects and the management of IUFD at the University Teaching Hospital (CHU SO).

2. Methodology

It was a descriptive cross-sectional study with retrospective data collection process that concerned cases of IUFD from January 1st to December 31, 2023, managed in the Gynecology and Obstetrics department of the CHU SO of Lomé. The data were collected using a pre-established and tested survey questionnaire. Included in the study were all the files of pregnant women in whom the diagnosis of IUFD was made before the start of labor or macerated at expulsion and whose gestational age is greater than or equal to 22 weeks or an expulsion weight greater than or equal to 500 grams. We excluded from our study cases due to medical termination of pregnancy, perinatal deaths and those not knowing the gestational age with a birth weight less than 500 g. Data analysis and processing were done by Epi Infos 7.2.6, Microsoft Word 2016 and Excel 2016.

3. Results

3.1. Frequency of Intrauterine Fetal Death

Of the 11,771 deliveries carried out at the CHU-SO maternity ward from January 1st to December 31, 2023, we recorded 286 cases of MFIU, representing a hospital frequency of 2.4%.

3.2. Socio-Demographic Characteristics

The mean age of participants was 29.5 ± 6 years with extremes of 17 years and 47 years. The age group of 20 to 35 years was represented at 73.8%. The secondary school represented 44.4%. Two hundred and twenty (220) pregnant women or 76.9% lived in cohabitation, and 37.1% were resellers/traders (Table 1).

Table 1. Distribution of women according to their socio-demographic characteristics and lifestyle.

	Effective	Percentage (%)
Age		
<20 years	13	4.5
20 - 35 years old	211	73.8
≥35 years old	62	21.7
Educational level		
Primary	68	23.8
Secondary	127	44.4
University	46	16.1
Illiteracy	45	15.7
Marital status		
Cohabitation	220	76.9
Bride	64	22.4
Bachelor	2	0.7
Occupation		
Reseller/trader	106	37.1
Hairdresser/Braider/Seamstress	101	35.3
Housekeeper/Domestic	53	18.5
Student	17	5.9
Official	9	3.2

3.3. Admission Method

Of the 286 pregnant women, 88.1% were referred, 9.8% were admitted and 2.1% were addressed.

3.4. Background, History and Progress of Pregnancy

Thirty-seven (37) pregnant women, or 12.9% had a history of cesarean section, 49.0% were paucigest and 30.1% were pauciparous (**Table 2**).

Table 2. Distribution of women according to their Medical, surgical and obstetric history.

	Effective	Percentage
Medical and surgical history		
Cesarean section	37	12.9
High blood pressure	18	6.3
Sickle cell disease	3	1.1
HIV*	3	1.1
Myomectomy	3	1.1
Asthma	2	0.7
Diabetes	2	0.7

Continued**Gesture**

Primigravida	53	18.5
Paucigest	140	49.0
Multigesture	93	32.5

Parity

Nulliparous	85	29.7
Primiparous	79	27.6
Pauciparous	86	30.1
Multiparous	36	12.6

Number of prenatal consultation

0	14	4.8
[1 - 3[136	47.6
≥4	136	47.6

Gestational age in weeks of amenorrhea (WA)

[22 - 28[73	25.5
[29 - 36[146	51.1
[37- 41[59	20.6
≥41 weeks	8	2.8

HIV*: human immunodeficiency virus (HIV).

3.5. Etiological Factors

The etiological factors of MFIU found were preeclampsia in 30.4% of cases (**Table 3**).

Table 3. Distribution of patients according to the etiological factors of IUFD.

	Effective	Percentage
Preeclampsia/eclampsia	87	30.4
Retroplacental hematoma (RPH)	74	25.9
Premature rupture of membranes	13	4.6
High blood pressure	10	3.5
Placenta previa/anemia	8	2.8
Malaria	7	2.4
Malformation	2	0.7
Cause unknown	85	29.7
Total	286	100.00

3.6. Support

Misoprostol was used for artificial induction of labor in 57.2% of cases and the

delivery route was vaginal in 75.9% of cases with cesarean section in 69 pregnant women or 24.1% (Table 4).

Table 4. Distribution of patients according to their support.

	Effective	Percentage
Mode of induction of labor (n = 286)		
Spontaneous work	89	41.0
Misoprostol	124	57.2
Foley catheter	4	1.8
Indications for cesarean section (n = 69)		
Retroplacental hematoma + shock state	59	85.5
Fetopelvic disproportion	04	5.8
Eclampsia	05	7.2
Transverse position	01	1.5

The fetuses were macerated at expulsion in 63.3% and 36.7% were stillborn.

4. Discussion

The fact that our study is limited only to the CHU SO constitutes a weak point but in no way affects the veracity of our results because the CHU SO is the largest national reference center in Togo.

In our study, the hospital frequency of MFIU was 2.4%. Our result is close to those of Mpoy *et al.* [1] in Lubumbashi and Douaguibe *et al.* [7] in Togo who found 4% and 3.6% respectively. Our result is contrary to that of Andriamandimbison *et al.* in France [4] who found a frequency of 4.4 ‰ in 2014. These results reflect the difficulties experienced in our African countries to anticipate events on the obstetric level either due to lack of adequate equipment or delay in consultation.

The age group most represented in our study was 20 - 34 years or 73.7%. Our result is similar to those of Douaguibe *et al.* [7] and Matega *et al.* [8] who found 77.6% and 67.1% respectively. This result could be explained by the fact that this age group is in the period of obstetric activity by excellence.

Pregnant women living in cohabitation represented 76.9% of cases. Our result is contrary to that of Kangulu *et al.* [5] who found rather more married women, *i.e.* 84.6%. The high frequency of women living in cohabitation could be explained by the weight of culture and religion. In Togo, given the low socio-economic standard of living and the high cost of dowry and marriage ceremonies, people prefer to live in cohabitation. This often constitutes a disadvantageous factor for adequate psychological and financial support for women during pregnancy.

The referred and addressed pregnant women constituted respectively 88.1% and 9.8% against 2.1% who were admitted. Contrary to our result, Kangulu *et al.* [5] reported that the patients had come on their own in 64.1% of cases. This difference

could be explained by the fact that the CHU-SO is a national reference center in Togo where pregnancy-related complications including MFIU are often sent.

IUFD occurred in pregnant women with gestational age between 29 - 36 weeks in 53.5% of cases. This result is close to the study by Kangulu *et al.* [5] who found 48.7%. This could be explained by the occurrence of maternal pathologies that can lead to IUFD during this gestational age range.

Preeclampsia was found as an etiological factor of IUFD in 30.4% of cases. This result is close to what of Diallo *et al.* [6] found 25.7% in Guinea. Preeclampsia remains a common cause of IUFD in our countries. Since preeclampsia causes Retroplacental hematoma, the latter constitutes a contributing factor to IUFD as shown in our study (25.9%).

In our series, 75.9% of our patients had given birth vaginally. This result is similar to that of Kangulu [5] who found 78.2% in Congo. This is explained by the fact that the vaginal route is recommended in cases of IUFD in the absence of any factor that could endanger the life of the pregnant woman. The causes are unknown in 29.7% of cases. Our result is close to what of Matega *et al.* found 26.5% [8] and Mpoy found 20.63% cases of IUFD without identified causes [1]. Contrary to our result, Randrianaivo *et al.* had obtained 8.5% for unidentified causes [9]. This proportion of unknown causes in our study is justified by the insufficiency of the technical platform for the etiological diagnosis of MFIU in training courses.

In our study, 63.3% of stillborn babies were macerated. Our result is similar to what Boubacar [6] found 68.3%. Indeed, when the fetus dies, maceration begins about 72 hours later [10]. These 72 hours are often exceeded before expulsion. This could be explained by the fact that the assessments should be available in order to be able to make the necessary arrangements for artificial induction and not forgetting the duration of labor.

5. Conclusion

The incidence of IUFD in our study population remains high. The majority of IUFD occurred between 29 - 36 weeks of gestation. Preeclampsia and Retroplacental hematoma were the main factors associated with IUFD but the cause was unknown in a significant proportion of pregnant women. The vaginal route was the first-line delivery route. Measures should be taken to minimize the occurrence of MFIU in order to enable women to have a positive experience of their pregnancy.

Conflicts of Interest

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

References

- [1] Mpoy, C.W., Katembo, B.M., Misumba, W.K. and Kinenkinda, X.K. (2022) Étude de la mort fœtale in utero à Lubumbashi, République Démocratique du Congo. *Revue de l'Infirmier Congolais*, **6**, 21-27. <https://doi.org/10.62126/zqrx.2022614>
- [2] Lansac, J. (2001) *Pratique de l'accouchement*. 3ème Edition, Masson, 548 p.

- [3] Quibel, T., Bultez, T., Nizard, J., Subtil, D., Huchon, C. and Rozenberg, P. (2014) Morts fœtales in utero. *Journal de Gynécologie Obstétrique et Biologie de la Reproduction*, **43**, 883-907. <https://doi.org/10.1016/j.jgyn.2014.09.018>
- [4] Andriamandimbison, Z.N., Ahoukeng, N.P., Adjoby, R.C., Ramarokoto, M.F., Dipace, C. and Dienga Tshofu, E. (2014) Mort fœtale in Utero: Étiologies et prise en charge à l'hôpital Laennec de Creil. *Revue de médecine périnatale*, **6**, 49-56. <https://doi.org/10.1007/s12611-014-0264-x>
- [5] Kangulu, I.B., Tambwe, A.M., Lumbule, J.N., Ngoy, E.K., Nzaji, M.K. and Muenze, P.K. (2016) Fréquence et facteurs de risque maternels de la mort fœtale in utero à Kamina, République Démocratique du Congo. *Pan African Medical Journal*, **23**, Article No. 114. <https://doi.org/10.11604/pamj.2016.23.114.7817>
- [6] Diallo, M.H., Baldé, I.S., Diallo, O., Diallo, B.S., Baldé, A., Barry, H., et al. (2016) Mort fœtale in utero: Aspect sociodémographique, prise en charge et pronostic maternel à la maternité de l'Hôpital régional de Mamou. *Revue Internationale des Sciences Médicales*, **18**, 15-23.
- [7] Douaguibe, B., Aboubakari, A.S., Bassowa, A., Ajavon, D., Ketevi, T., Logbo-Akey, K.E., et al. (2019) Fetal Death in Utero: Maternal Epidemiological and Prognostic Aspects at Sylvanus Olympio Teaching Hospital in Lomé. *Open Journal of Obstetrics and Gynecology*, **9**, 511-520. <https://doi.org/10.4236/ojog.2019.94050>
- [8] Matega, T.H., Labama, N.O., Kanilame, F.Y., Maindo, M.A.A., Juakali, J.S. and Katenga, G.B. (2023) Mort in Utero Tardive: Fréquence, facteurs associés et méthodes de déclenchement du travail à Kisangani, République Démocratique du Congo. *Annales Africaines de Médecine*, **16**, 5363-5374. <https://doi.org/10.4314/aamed.v16i4.9>
- [9] Randrianaivo, H., Robillard, P.-., Barau, G., Gérardin, P., Heisert, M., Kauffmann, E., et al. (2006) Étude des 178 morts fœtales in utero dans le sud de l'île de la Réunion en 2001-2004. *Journal de Gynécologie Obstétrique et Biologie de la Reproduction*, **35**, 665-672. [https://doi.org/10.1016/s0368-2315\(06\)76461-4](https://doi.org/10.1016/s0368-2315(06)76461-4)
- [10] Merger, R., Levy, J. and Melchior, J. (1995) Précis d'obstétrique. 6ème Edition, Masson, 597 p.