



(RESEARCH ARTICLE)



Analysis of emergency hysterectomies at Zinder mother and child health center (CSME)

Oumarou Garba ¹, Salifou Lankoande Z ¹, Nabara I. ², Isahirou S ¹, Hassane L ³, Gabkika B ^{4,*} and Nayama M ⁵

¹ Zinder Mother and Child Health Center, Gynecology-Obsterics, André Salifou University, Zinder.

² Zinder Mother and Child Health Center, Zinder.

³ Faculty of Health Sciences André Salifou University, Zinder.

⁴ Faculty of Health Sciences, University of N'djamena.

⁵ Faculty of Health Sciences, Abdou Moumouni University, Niamey.

Magna Scientia Advanced Research and Reviews, 2023, 07(01), 025–029

Publication history: Received on 17 December 2022; revised on 01 February 2023; accepted on 03 February 2023

Article DOI: <https://doi.org/10.30574/msarr.2023.7.1.0020>

Abstract

Introduction: Emergency obstetric hysterectomy is a life-saving surgery performed as a last resort in the face of a serious accident during parturition. The objective is to describe the risk factors, the indications, the types of hysterectomy performed and their complications encountered.

Patients and methods: To achieve our objectives, we carried out a retrospective study from January 1, 2016 to December 31, 2018. Were included, patients who underwent a hysterectomy of obstetric origin at the CSME of Zinder. Results the study focused on 100 cases of obstetric hysterectomy recorded out of 10,124 deliveries, i.e. a frequency of 0.98%. The age of our patients varied between 16 years for the youngest and 45 for the oldest with an average of 30.5 years. They were uneducated in 84% of cases, mostly multiparous 72%, 71% of whom lived in rural areas. Pregnancy was not continued in 81%. The main indications were uterine rupture, uterine atony and PRH in 68%, 16% and 14% respectively. The hysterectomy was total in 41% and subtotal in 59%. Maternal morbidity was dominated by anemia with 84.2%. Perinatal and maternal mortality were respectively 76.69% and 9%.

Conclusion: Obstetric hysterectomy is frequent at the CSME of Zinder, all ages were concerned, and they were mostly multiparous, with the deadliest obstetric complications. Maternal and perinatal morbidity and mortality were very high.

Keywords: Obstetric hysterectomy; CSME; Zinder Niger; Hysterectomies

1. Introduction

Maternal health in under-medicalized countries remains a concern due to the difficulty of access to quality obstetric care, insufficient health infrastructure; poor quality of prenatal consultation, an uneducated population and poverty [1]. Pregnancy and childbirth are always at risk of complications that often occur in remote settings. And even, once the complications arise, other determinants of maternal and perinatal morbidity and death are added: these are the three delays, the first delay is that observed in the communities to use health services. The 2nd delay is that of the distance, linked to the poor state of the roads, the means of transport and the time taken to reach the healthcare structures. Finally, the 3rd delay is that observed in the care structures ranging from diagnosis to patient management [2]. Among the lifesaving gestures, surgery occupies an important place in obstetrical situations, it is emergency obstetrical hysterectomy. This intervention, most often performed in an extremely urgent situation in an obstetric setting, has become rare in developed countries, and is often the last resort in the event of hemorrhagic complications [3]. The

* Corresponding author: OUMAROU GARBA Souleymane

objective of the study is to describe the risk factors, the indications, the types of hysterectomy performed, the complications that occurred and the maternal and neonatal prognosis.

2. Methodology

This was a retrospective collection over a period of 3 years from January 1, 2016 to December 31, 2018, carried out at the Center for Mother and Child Health (CSME). Included in the study were all patients admitted and who had undergone an obstetric hysterectomy whose files were complete. All patients whose files were incomplete were excluded. The study variables were the socio-demographic characteristics of the study population, the risk factors for obstetric hysterectomy reported in the literature, the indications, the type and complications of hysterectomy, Data collection was made from patient records and the operating room register of the CSME. The data contained in these documents was collected from a survey sheet and analyzed with Epi info 3, 4 and 5 software; Excel 2013; and Word 2013.

Results During the study period (January 1, 2016 to December 31, 2018), 10,124 pregnancies were recorded, including 100 cases of hysterectomies, i.e. a frequency of 0.98%. The age of our patients varied between 16 years for the youngest and 45 for the oldest with an average of 30.5 years. The observation of the socio-demographic characteristics shows that the majority of the patients were aged between 30-34 years (33%), which can be categorized as young women.

The majority were evacuees (71%), with no education (84%), and resided in rural areas (83%) and were multiparous (72%). The pregnancy was not monitored (81%), and the history of uterine scar was (16%). These epidemiological aspects are summarized in table 1.

Table 1 Socio-demographic characteristics

Variables		n(%)
Age	16 - 25	18(18)
	26 - 29	24(24)
	30 - 34	33(33)
	35 - 29	25(25)
Parity	1	15(15)
	2 - 3	13(13)
	≥ 4	72(72)
Prenatal consultation	0	81(81)
	1 - 3	16(16)
	> 3	3(3)
Origin	rural	83(83)
	Urban	17(17)
Educational level	uneducated	84(84)
	Educated	16(16)
History of uterine scar	scarred uterus	16(16)
	healthy uterus	84(84)

All patients were married (98.78%), the average distance traveled for evacuation was 88km.

The main indications for hysterectomy were uterine rupture (68%), uterine atony (32%). Total hysterectomy was performed in (41%) and subtotal in (59%). Postoperative complications were anemia (55%), parietal suppuration (5%) and vesicovaginal fistula (4%). The prognosis was heavy with consequences with maternal (9%) and perinatal (76.69%) mortality Table 2.

Table 2 Mode of admission, indications, types of hysterectomies, complications

		N (%)
Mode of admission	Evacuation	71(71)
	Coming by itself	29(29)
Indications	Uterine ruptures	68(68)
	Uterine atony	32(32%)
	Total	100(100)
Types of hysterectomy	Subtotal hysterectomy	59(59)
	Total hysterectomy	41(41)
	Total	100(100)
Complications observed	Evisceration	2(2)
	Fistula	4(4)
	Parietal suppuration	5(5)
	Maternal death	9(9)
	Perinatal death	79(79)

3. Discussions

In the literature, the frequency of emergency obstetric hysterectomy varies from one region to another; indeed, if it has become exceptional in developed countries, it most often remains the last possible life-saving gesture for mothers in under-medicalized countries [2-4]. African studies have reported varying incidences: Sy T in Guinea (0.16%), Nayama in Niger (1.35%) and Abidi (1.3%) in Tunisia [5, 6, 7] while in developed countries the frequency is relatively low and varied between 0.52‰ to 1.07‰ of deliveries [8-9]. In developing countries, neglect or inaccessibility to prenatal care, ignorance of risk factors and danger signs of pregnancy, socio-economic factors and delays in early access to care expose women to often fatal hemorrhagic complications [2].

In our study, the frequency of obstetric hysterectomy was 0.98%, this high prevalence could be explained not only by the status of the CSME which is a regional reference center, but also hysterectomy is our therapeutic recourse for rescue. Maternal.

Advanced age and multiparity were classically considered to be associated with an increased risk of hysterectomy for hemostasis mentioned in the literature [1-5-6-7]. This observation is made in our study with maximum obstetric hysterectomies in women in the age group of 30 to 34 years 33% (n = 33) and multiparas 72% (n = 72). Multiparity was found in many other African studies [5-10-11], in fact multiparity weakens the myometrium, thus favoring ruptures and uterine inertia [1-12]. Quality prenatal monitoring can detect certain factors early and take action (hypertension blood pressure in pregnancy, scarred uterus, surgical bedpans, and defective presentations) [13]. In our study, the absence of prenatal follow-up (SPN) was a risk factor, 81% (n= 81) had not benefited from follow-up, Adisso in Niger [14], found in his series 54, 17% not tracked. Pregnancy monitoring alone is not enough, it is the correct monitoring of childbirth and postpartum that can prevent complications leading to hysterectomy [4].

The majority of patients included in our study were evacuated, this could reflect the delay in early recourse to care or the delay in the management of potentially hemorrhagic complications. In our study, uterine ruptures dominated the indications for haemostasis hysterectomy 68% (n=68), uterine atony 32% (n=32). This result was found by other authors [4-15-16-]. But other authors [17-18] have reported uterine atony as the main cause in their series. Uterine ruptures and atony are most often the result of a weakness in the health system, for its accessibility and availability. in emergency obstetric care. Subtotal interadnexal hysterectomy was performed in 59% of patients. However, the rates of subtotal interadnexal hysterectomy found in the literature [2-4-5-6] are higher than ours. It is a simple surgical technique that can be performed more quickly than total hysterectomy, with fewer complications [5]. The complications found were anemia (55%), parietal suppuration (5%) and vesicovaginal fistula (4%). These complications have been

reported by other authors [4-5]. Intraoperatively, wounds of neighboring organs are accidents encountered during hysterectomy for hemostasis. The most frequent complications are bladder wounds followed by intestinal wounds [7].

Regarding the assessment, we recorded 9 maternal deaths, our result is higher than that of Adisso P.R [14] with 5.55% and lower than those reported by Pambou. O et al [20] with 28.57% and Nayama et al [21] with 21.95% and 76.69% perinatal deaths.

4. Conclusion

Obstetric hysterectomy is a frequently performed procedure at the CSME. Uterine rupture and postpartum hemorrhage were the main indications. Multiparity, history of scarred uterus and rural residence were identified risk factors. She was burdened with heavy morbidity. Early access to care, good monitoring of pregnancy and childbirth can prevent it.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] Maine D, Akalin M Z, Ward V M, Kamara A. The design and evaluation of maternal mortality prevention programs. Columbia: Center for Population and Family Health Columbia University School of Public Health;1997:138p
- [2] Fané Seydou, Bocoum Amadou, Sylla Cheickna, Sissoko Abdoulaye, Traoré Alassane, Traoré Soumana Oumar, Emergency Obstetric Hysterectomies at the CHU Gabriel Toure in Bamako from 2003 to 2020, *Heath Sci. Say.* 2021;Vol 22 (5) :33-39
- [3] Khan KS et al. WHO analysis of causes of maternal death: asystematicreview. *Lancet* 2006; 367 (9516): 1066-74.
- [4] J.A Randriambelomanana, Z.A Botolahy, S.T Rakotoarivony, S.A.E Herinirina, H Rasataharifetra, R Ratsivalaka, Obstetric hysterectomies performed in the Maternity Department of the University Hospital of Toamasina Madagascar, *Review of Anesthesia-Resuscitation and Emergency Medicine* 2011; 3(1): 8-11.
- [5] Sy T, Leno D W A, Conte I, Camara M K, Diallo A B, Bah Ik, Hamadou M A, Tolno J, Hyjazi Y, Keïta N. Obstetric hysterectomy: three years of experience at the Donka Maternity Hospital of the University Hospital of Conakry .*SAGO Journal*, 2017, 18(1): 22-26
- [6] Nayama M, Moulaye AA, Djibrill B, Garba M, Idi N, Boukerrou M. Haemostasis hysterectomies in under-equipped countries: a vital gesture. Prospective study in a reference maternity hospital in Niger. *GynecolObstet Fert.* 2006; 34: 900-905
- [7] Idriss Abidi et al. Retrospective study on 70 cases of hemostasis hysterectomy in the department of obstetrics gynecology of Ben Arous Hospital, Tunisia. *Pan African Medical Journal.* 2022;42:172. [doi: 10.11604/pamj.2022.42.172.34423].
- [8] Athanasios F.K et al. Epidemiological analysis of peripartum hysterectomy across nine European countries, *Acta Obstet Gynecol Scand.* 2020; 99: 1364-1373, <https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1111/aogs.13892> accessed 02/January/2023.
- [9] Nicolae Gica, Carina Ragea, Radu Botezatu, Gheorghe Peltecu, Corina Gica, Anca Maria Panaitescu, Incidence of Emergency Peripartum Hysterectomy in a tertiary Obstetrics Unit in Roumania, *Medicina* 2022;58(1):111.<https://doi.org/10.3390/medicine58010111>
- [10] Shiroker S.D Ankita Pandey, Sunil Yadav, Emergency obstetric hysterectomy: review at tertiary care hospital, *Int J Reprod Contracep Obstet Gynecol.* 2016; 5(11):3811-3814.
- [11] Camara, D, Kone, J Sidibé, A , Bocoum, Sissoko H, and Traoré, S. Hemosatosis hysterectomy in Bamako: Epidemiological aspects and maternal prognosis. *The Journal of Medicine and Health Science*, 2020; 19: 29-31.

- [12] Zelop CM, Harlow BL, Frigolette FD, Safon LE, Saltzman DH. Emergency peripartum hysterectomy. *Am J Obstet Gynecol* 1993;168(5):1443-48[https://doi.org/10.1016/S0002-9378\(11\)90779-0](https://doi.org/10.1016/S0002-9378(11)90779-0)
- [13] Osungbade K, Oginni S, Olumide A. Content of antenatal care services in secondary health care facilities in Nigeria: implication for quality of maternal health care. *Int J Qual Health Care* 2008; 20: 346–51.
- [14] Adisso P.R, Analysis of hysterectomies of obstetric origin at the Maternity Issaka Gazoby. ;[Medical : thesis]. Niamey: Univerity Abou Moumouni; 2017.
- [15] Daouda Camara, J Koné, A Sidibé, A Bocoum, H Sikasso, SO Traoré et al. hemostasis hysterectomy in Bamako: Epidemiological aspects and maternal prognosis, *Health Science and Disease* 2018; , 19(3):45
- [16] Annela Gul Shaikh, Abdul Malik Sangri, Kulsoom Azad Lashari, Fozia Unar, Bushra Noor, Saiida, Obstetrical Hysterectomy-Is a Life Saving Option. *Med. Forum* 2020; 31(3):35.
- [17] Anita G Pawar, Mangala A Shinde, M Saraajothi, Prinyanka B Nemagouda, Five years review of obstetrical hysterectomy at tertiary care center. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* 2021;10(1):308-315.
- [18] Mathlouthi N, Trabetsi H, Zayen S, Amouri H, Dhouib M, Chaabe ne K, Ayadi M, Kolsi K, Ben Ayed B, Guermazi M. Haemostasis hysterectomy: Indications and prognosis. *Tunis Med* 2012; 90(8):625-9.
- [19] Kwame-Aryee R, Kwakye A, Seffah JD. Peripartum hysterectomies at Korle-Bu Teaching Hospital: A review of 182 consecutive cases. *Ghana Med J* 2007; 41(3) 133 -38
- [20] Pambou O. Ekoundzola J.R, Uzan S. Serious haemorrhages during delivery at the C.H.U of Brazaville. *Mef Afr Noire* 1996;43(7):418-422.
- [21] Nayama .M, Gama-Alio.A., Garba.M, Idi.N., Oumara.M., Guédé.S., Mallam-Issoufou. M, Salouhou. S, Djibrill. B., Kamaye.M., Alihonou. E. Obstetrical hysterectomies at the Issaka Gazoby maternity hospital in Niamey. Apropos of 154 cases, *Med Afr Noire*. 2014 ;61(12): 613-621