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Rising Cesarean Section Rates in Nepal: Question of safety and Integrity on Obstetric Emergency Practice

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Abstract

A life-saving obstetric emergency surgical procedure, cesarean section is crucial without its access the large number of pregnant women and their unborn babies die every year across the globe especially in low-income countries. The World Health Organization favours 10-15% cesarean section rate and suggests to be performed only when justified by a medical condition. Otherwise unnecessary health of mother and babies including social and economic implications would challenge childbearing women, babies, their families and the state. Recently in Nepal there is a sharp rising trend of cesarean section rates from 20 to 81% in different hospitals particularly in the private setting indicating over-medicalization of childbirth unnecessarily performing without medically justified.

This arise the issue of human rights violence of childbearing women and professional integrity of a practitioner and safety of the clients. Growing cesarean delivery rate in Nepal urgently calls for healthcare policy makers and professionals to prospectively investigate and monitor its medical, social and economic implications for the society and the nation. The World Health Organization recommended use of the Robson criteria would be one of the best strategies in reducing the frequency of the procedure that should include avoidance of medically unnecessary primary cesarean section and improving case selection for induction and prelabour cesarean section besides educating childbearing women and their families about the consequences of unnecessary request of the procedure.

Keywords: Cesarean section; Violence; Nepal; World health organisation

Introduction

A cesarean section is life-saving obstetric emergency surgical intervention essential when certain complications arise during pregnancy and labour without its access the large number of women and their unborn babies die every year, especially in low-income countries. Nevertheless, the World Health Organization (WHO) suggests that no region in the world is justified in having a cesarean section rate greater than 10-15% [1]. A 2015 WHO statement concludes that cesarean sections are effective in saving maternal and infants' lives, but only when they are required for medically indicated reasons. It states that, at a population level, cesarean section rates higher than 10% are not associated with reductions in maternal and newborn mortality rates, and it should be performed only when medically justified [2]. Although cesarean is crucial that can save lives, it may also lead to significant and sometime permanent complications, particularly when not justified by a medical condition, expose women to well-documented risks of death, disability and depression including increased health costs [3-5].

Many studies have shown that women who have cesarean section without medical necessities are at high risk of higher rates of infection, pain, pre-hospitalization, breastfeeding challenges, and complications in future pregnancies and even death of childbearing women [6-13]. Additionally, babies delivered by cesarean sections have higher rates of hospital admission, need for ventilation, respiratory morbidity and mortality [6,14-16]. Cesarean section born babies are more likely to have long-term negative health effects, such as asthma, type-1 diabetes, obesity, metabolic diseases and lead to unexplained stillbirths in the second pregnancy [3,17-20]. These risks explain why cesarean on demand or without any maternal and fetus conditions is

considered, an expensive and dangerous luxury, suggesting an urgency of controlling the rate of cesarean sections [21-24].

Despite recommendations and warnings about its risks, cesarean section rates have been constantly increasing across the globe, reaching epidemic proportions in some countries, especially among the urban rich in high, middle and low-income countries and the increase in cesarean rates shows no signs of slowing down [25-27]. Although multi factorial reasons implicated in rising cesarean sections rates, however, it has become a major public health concern and a cause for the debate as it is recognized as the violence of human rights of childbearing women.

Nepal Context

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 Table 1: Percentage of cesarean section in different hospitals of Nepal.

Hospitals, Location	Rate
Om Hospital, Chabahil, Kathmandu	81%
Medicare Hospital, Chabahil, Kathmandu	79%
Valley Maternity Nursing Home	77%
B & B Hospital	67%
Nepal Police Hospital, Kathmandu	64%
Kathmandu Model Hospital	60%
Kritipur Hospital (managed by Phect Nepal), Kathmandu	51%
Patan Hospital, Lagankel, Lalitpur	47%
Kathmandu Medical College, Sinamangal, Kathmandu	46%
Civil Service Hospital, New Baneshwor, Kathmandu	45%
TU Teaching Hospital, Maharajgunj, Kathmandu	39%
Shree BirendraSainik Hospital (Army Hospital), Kathmandu	33%
BP Koirala Institute of Health Science, Dharan	30%
Nobel Medical College Hospital, Biratangar, Morang	20%
Paropakar Maternity and Women's Hospital (PMWH), Thapathali	17%
Karnali Academy of Health Sciences (KAHS) Teaching Hospital, Jumla	15%
Nepal (Public 12%, Private 35%)	9%
World Health Organization	10-15%

In the recent years like in the most middle and highincome countries there is a rising trend of cesarean births in Nepal, especially in urban settings (Table 1). Studies show that women living in urban, having higher levels of education, on highest wealth quantile and nulliparous are the one who are going through unnecessary cesarean delivery [28-29]. In some hospitals, for instance, in Patan Hospital and Tribhuvan University Teaching Hospital there are growing trend of cesarean section rate from 23% in 2005 to 44% in 2014 and 17% in 2005 to 25% in 2010 respectively indicating declining in normal spontaneous and instrumental vaginal deliveries [30,31]. This indicates that unknowingly these women are becoming the victim of obstetric violence that they are unaware of so do the medical professionals are becoming perpetrators, which are they are unaware of because of own ignorance [32,33].

A senior consultant obstetrician and researcher of Nepal, Professor Ganesh Dangal asserts that obstetric violence is common in Nepal that yet to be researched. Paradoxically, in rural Nepal women are facing life threating challenge to give complicated birth because of lack of access of obstetric emergency service where as in urban areas there is a medicalization of childbirth with unnecessary biomedical intervention treating physiological reproductive processes as biomedical problems that can be treated by the medical profession [2,34,35].

With great concern while enquiring about alarmingly escalating cesarean rates in Nepal some professionals, especially obstetricians assert that women are the one who prefer and request for cesarean delivery. However, studies in different settings including Nepal reveal that such assertion has no valid evidence to prove that actually it is because of maternal request unnecessarily cesarean sections have been performed [36-44]. Moreover, the American College of Obstetricians and Gynecologists [45] clearly states that cesarean delivery on maternal request should not be motivated and recommended acknowledging the potential risks of the procedure instead in the absence of maternal or fetal indications for cesarean delivery, a plan for vaginal delivery is safe and appropriate and should be recommended for clients.

Everyone working to improve maternal health care strives towards common goal, healthy mothers, and healthy babies; however, medical model of care can either protect or violate the fundamental human rights of childbearing women. There is a growing concern among women's rights and human rights advocates, and health research professionals regarding overmedicalization and commercialization of childbirth, particularly in the case of low risk pregnancy and that the cesarean section rate, recognizing as a violation of human rights in childbirth and suggesting for social model of care to empower childbearing women [46].

Conclusion

To effectively control the increasing rate of cesarean section in Nepal, the government of Nepal should develop specific policies and measures, such as use of rate of cesarean section without medical necessities as one of the hospital's overall rating components, and popularizing of natural childbirth. It is essential to educate reproductive age women providing factual evidence based accurate information on mode of delivery and its implications. Additionally, use of WHO proposes the Robson criteria as a standard for assessing, monitoring and comparing cesarean section rates within healthcare facilities overtime, and between facilities would assist in managing cesarean section rates at both the individual facility and national level by identifying how use of this intervention in specific obstetric subpopulations affects overall cesarean section rates, and how obstetric populations and intervention rates change with time [2, 31,47,48]. Escalating cesarean delivery rate in Nepal urgently calls for healthcare policy makers and professionals to prospectively investigate and monitor its medical, social and economic implications for the society and the nation.

References

- WHO World Health Organisation (1985) Appropriate technology for birth. Lancet 2(8452): 436-437.
- 2. WHO World Health Organisation (2015) WHO Statement on cesarean section rates.
- Lumbiganon P, Laopaiboon M, Gülmezoglu AM, Souza JP, Taneepanichskul S, et al. (2010) Method of delivery and pregnancy outcomes in Asia: the WHO global survey on maternal and perinatal health 2007-2008. Lancet 375(9713): 490-499.
- 4. Souza JP, Gülmezoglu A, Lumbiganon P, Laopaiboon M, Carroli G, et al. (2010) Cesarean section without medical indications is associated with an increased risk of adverse short-term maternal outcomes: The 2004-2008 WHO Global Survey on Maternal and Perinatal Health. BMC 8: 71.
- Chang SR, Chen KH, Ho HN, Lai YH, Lin MI, et al. (2015) Depressive symptoms, pain, and sexual dysfunction over the first year following vaginal or cesarean delivery: a prospective longitudinal study. Int J Nurs Stud 52(9): 1433-1444.
- American College of Obstetricians and Gynecologists, Society for Maternal-Fetal Medicine, (2014) Obstetric care consensus: Safe prevention of the primary cesarean delivery. ObstetGynecol 123: 693-711.
- Albokhary AA, James JP (2014) Does cesarean section has an impact on the successful initiation of breastfeeding in Saudi Arabia? Saudi Med J 35(11): 1400-1403.
- 8. Srun S, Sinath Y, Seng AT, Chea M, Borin M, et al. (2013) Surveillance of post-cesarean surgical site infections in a hospital with limited resources, Cambodia. Infect Dev Ctries 7(8): 579-585.
- 9. Moraitis A, Oliver-Williams C, Wood A, Fleming M, Pell JP, et al. (2015) Previous cesarean delivery and the risk of unexplained stillbirth: Retrospective cohort study and meta-analysis. BJOG 122(11): 1467-1474.
- 10. ONeill SM, Agerbo E, Kenny LC, Henriksen TB, Kearney PM, et al. (2014) Cesarean section and rate of subsequent stillbirth, miscarriage, and ectopic pregnancy: a Danish register-based cohort study. PLoS Med 11(7): e1001670.
- Timor-Tritsch IE, Monteagudo A (2012) Unforeseen consequences of the increasing rate of cesarean deliveries: early placenta accreta and cesarean scar pregnancy. A review. Am J Obstet Gynecol 207(1): 14-29.
- Prior E, Santhakumaran S, Gale C, Philipps LH, Modi N, et al. (2012) Breastfeeding after cesarean delivery: a systematic review and metaanalysis of world literature. Am J Clin Nutr 95(5): 1113-1135.
- 13. Gurol-Urganci I, Cromwell DA, Edozien LC, Smith GCS, Onwere C, et al. (2011) Risk of placenta previa in second birth after first birth cesarean section: a population-based study and meta-analysis. BMC Pregnancy Childbirth 11(1): 95.
- 14. Kyu HH, Shannon HS, Georgiades K, Koyle MH (2013) Cesarean delivery and neonatal mortality rates in 46 low- and middle-income countries: a propensity score matching and meta-analysis of demographic health survey data. Int J Epidemiol 42(3): 781-791.
- Li HT, Zhou YB, Liu JM (2013) The impact of cesarean section on offspring overweight and obesity: a systematic review and metaanalysis. Int J Obes 37(7): 893-899.

- De Luca R, Boulvain M, Irion O, Berner M, Pfister RE (2009) Incidence of early neonatal mortality and morbidity after late-preterm and term cesarean delivery. Pediatrics 123(6): e1064-e1071.
- 17. Blustein J, Liu J (2015) Time to consider the risks of cesarean delivery for long term child health. BMJ 350: h2410.
- Sevelsted A, Stokholm J, Bonnelykke K, Bisgaard H (2015) Cesarean section and chronic immune disorders. Pediatrics 135(1): e92-e98.
- Thavagnanam S, Fleming J, Bromley A, Shields MD, Cardwell CR (2008) A meta-analysis of the association between cesarean section and childhood asthma. Clin Exp Allergy 38(4): 629-633.
- 20. Cardwell CR, Stene LC, Joner G, Cinek O, Svensson J, et al. (2008) Cesarean section is associated with an increased risk of childhoodonset type 1 diabetes mellitus: a meta-analysis of observational studies. Diabetologia 51(5): 726-735.
- 21. He Z, Cheng Z, Wu T, Zhou Y, Chen J, et al. (2016) The costs and their determinant of cesarean section and vaginal delivery: an exploratory study in Chongqing Municipality, China. Bio Med Res Int pp. 1-9.
- 22. Gibbons L, Belizán JM, Lauer JA, et al. (2010) The global numbers and costs of additionally needed and unnecessary cesarean sections performed per year: overuse as a barrier to universal coverage. World Health Report, Background paper. Geneva: World Health Organization.
- Allen VM, OConnell CM, Farell SA, Baskett TF (2005) Economic implications of method of delivery. Am J Obstet Gynecol 193(1): 192-197.
- Henderson J, McCandlish R, Kumiega L, Petrou S (2001) Systematic review of economic aspects of alternative modes of delivery. BJOG 108(2): 149-157.
- 25. Betrán AP, Ye J, Moller AB, Zhang J, Gülmezoglu AM, et al. (2016) The increasing trend in cesarean Section Rates: Global, Regional and National Estimates: 1990-2014. PLoS ONE 11(2): e0148343.
- 26. Mi J, Liu F (2014) Rate of cesarean section is alarming in China. Lancet 383(9927): 1463-1464.
- 27. Cavallaro FL, Cresswell JA, França GV, Victora CG, Barros AJ, et al. (2013) Trends in cesarean delivery by country and wealth quintile: cross-sectional surveys in southern Asia and sub-Saharan Africa. Bull World Health Organ 91(12): 914-922.
- Ministry of Health (2017) Nepal demographic and health survey 2016. Ministry of Health, Nepal.
- 29. Ministry of Health (2012) Nepal demographic and health survey 2011. Ministry of Health, Nepal.
- Lamichhane B, Singh A (2014) Changing trend in instrumental vaginal deliveries at Patan Hospital. Nepal J Obstet Gynaecol 20(2): 22-35.
- 31. Amatya A, Paudel R, Poudyal A, Wagle RR, Singh M, et al. (2013) Examining stratified cesarean section rates using Robson classification system at Tribhuvan University Teaching Hospital. J Nepal Health Res Counc 11(25): 255-258.
- 32. Pope TM (2017) Legal Briefing: unwanted cesareans and obstetric violence. J Clin Ethics 28(2): 163-173.
- 33. Perez DR (2010) Obstetric violence: a new legal term introduced in Venezuela. Int J Gynecol Obstet 111(3): 201-202.
- 34. Bohler E (2011) It is dangerous to become a mother. Tidsskr Nor Laegeforen 13(19): 1913-1914.
- 35. Gijsbers vanWijk CM, van Vliet KP, Kolk AM (1996) Gender perspectives and quality of care: towards appropriate and adequate health care for women. Soc Sci Med 43(5): 707-720.
- 36. Schantz C, Sim KL, Petit V, Rany H, Goyet S (2016) Factors associated with cesarean sections in Phnom Penh, Cambodia. Rep Health Matters 24(48): 111-121.

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- 37. Samdal LJ, Steinsvik KR, Pun P, Dani P, Roald B, et al. (2016) Indications for cesarean sections in rural Nepal. J Obstet Gynecol India 66(suppl 1): 284-288.
- Pradhan P, Shrestha S, Rajbhandari PK, Dangal G (2014) Profile of cesarean section in Kritipur Hospital, Nepal. J Obstet Gynecol 9(2): 51-54.
- Ecker J (2013) Elective cesarean delivery on maternal request. JAMA 309(18): 1930-1936.
- Chhetri S, Singh U (2011) Cesarean section: its rates and indications at a tertiary referral center in Eastern Nepal. Health Renaissance 9(3): 179-183.
- Mazzoni A, Althabe A, Liu NH, Bonotti AM, Gibbons L, et al. (2011) Women's preference for cesarean section: A systematic review and meta-analysis of observational studies. BJOG 118(4): 391-399.
- Subedi S (2012) Rising rate of cesarean section: a year review. J Nobel Medical College 1(2): 72-76.



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- 43. Adhikari S, Adhikari TB (2015) A low share of cesarean delivery on maternal request in Nepal. BMJ 350: h2410.
- 44. Visco AG, Viswanathan M, Lohr KN, Wechter ME, Gartlehner G, et al. (2006) Cesarean delivery on maternal request: maternal and neonatal outcomes. Obstet Gynecol 108(6): 1517-1529.
- 45. The American College of Obstetrics and Gynecology Committee on Obstetric Practice, The Society for Maternal-Fetal Medicine. (2013) Committee Opinion Number 561: Nonmedically Indicated Early-Term Deliveries. Obstet Gynecol 121: 911-915.
- 46. Lokugamage AU, Pathberiya SDC (2017) Human rights in childbirth, narratives and restorative justice: a review. Rep Health 14: 17.
- 47. Robson MS (2001) Can we reduce the cesarean section rate? Best Pract Res ClinObstetGynecol 15(1): 179-194.
- 48. Vogel JP, Betran AP, Vindevoghel N, Souza JP, Torloni MR, et al. (2015) Use of the Robson classification to assess cesarean section trends in 21 countries: a secondary analysis of two WHO multicountry surveys. The Lancet Global Health 3(5): e260-e270.

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