



REDRESSAL OF RISE IN CAESAREAN SECTION RATES IN PUBLIC HOSPITALS

Medicine

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ABSTRACT

The study aims to know and compare the impact of change in health care facility on Caesarean Section (CS) rate within public and private sector. It is a retrospective observational study. This pilot study is based on the one year data collected from 10 different health care facilities. The data includes CS carried out in 2 public institutes and 8 maternity homes from private sector. In the present study the caesarean section rate was more than the WHO recommendations in all the 10 institutes which include both public and private hospitals. The worrisome observation in our study is that the CS rate of public hospitals is no way close to the percentage recommended by WHO. The CS rate in private sector was between 50 to 60 percent. Along with the medical indications, the factor like the obstetricians' environment has got the impact on the decision making in favor of CS. The majority of the maternity homes are run by lady obstetrician single handed with untrained staff. They need to work in a situation where monitoring of labor for vaginal birth leads to uncertainty in respect of the safety of the baby to be born and the time duration required. This fear of uncertainty, accountability makes the obstetricians CS friendly. The CS rates in public hospitals are on rise despite having better infrastructure. It is necessary to examine the obstetricians' environment in both public and private sector hospitals providing maternity services. It may be easier to begin the protocol to restrict the CS rate from public hospitals as there is some hierarchy in the department associated with trained staff. Subsequently, protocol can be designed for private sector.

KEYWORDS

caesarean section rate, Public Hospitals, Private Sector, Health care facility

INTRODUCTION

It is well accepted that more number of Caesarean Sections (CS) are being done in private sector as compared to public sector hospitals. The worldwide efforts are on to reduce the CS rate for the last few decades. Despite the efforts, rising CS rate problem has probably reached to an enigmatic level. The World Health Organization (WHO) recommends the optimal caesarean section rate to be between 10 to 15 percent. (1) A study published in JAMA in 2015 mentions that the CS rate up to approximately 19 per 100 live births was associated with lower maternal or neonatal mortality among WHO member states. (2) The analysis of district level household survey-4 (DLHS-4) of India shows that CS births are nearly three times more in private as compared to public sector health facilities. (3)

In the current international scenario of increasing rates of CS, the main drivers of this trend are still unclear and controversial. (4) Cheng YW, Snowden JM, et al in a study mention that the decision making of CS is a complicated process. They further state that only patient factors cannot be the basis to undertake CS. They identified certain factors in obstetricians' environment associated with their likelihood of recommending cesarean delivery. The study further draws our attention to the factors like how the care is organized for obstetric patients, including the financial and time management incentives for obstetricians to perform caesarean sections. They consider availability of midwives and the nature of their roles within maternity services, as likely important reasons for many differences in CS rate. (5)

The fundamental step to deal with the complexity of rising rate of CS would be to collect the data from different healthcare facilities providing maternity services both from public and private sector and to analyze it. We undertook a pilot study in this regard. The study aims to know and compare the impact of change in health care facility on CS rate within public and private sector.

METHODOLOGY

It is a retrospective observational study carried out at Nanded, a district place in western India. This pilot study is based on the data collected from 10 different health care facilities. CS cases carried out from 1st April 2020 to 31st March 2021 in identified hospitals were included. The author himself went to all the ten hospitals to gather the record every month. We studied the data of above mentioned period from 2 public institutes and 8 maternity homes from private sector. Out of the two public hospitals, one is Govt. medical college hospital (GMCH) and another is Women's Hospital (WH) run by state Government. In private sector, the data from four maternity homes run single handed by lady obstetricians, one hospital run by single handed male obstetrician, another by three male obstetricians and a maternity home run by both male and lady obstetricians together was taken into

account. To know the status of CS in a maternity home from rural area we included the data from maternity home located at a taluka (a subdivision of district) place in Nanded district.

Table 1: Features of the health care facilities providing maternity services

Sr No.	Name of Health Care Facility	Location	Type of Health Care Facility	No. of Beds	No. of Obstetricians
1	Women's Hospital (WH)	Urban	Govt Women's Hospital	60	04
2	Govt Medical College Hospital (GMCH)	Urban	Govt Medical College Hospital	140	20
3	Pvt Hospital 1	Urban	Single lady obstetrician	10	01
4	Pvt Hospital 2	Urban	Single lady obstetrician	08	01
5	Pvt Hospital 3	Urban	Single lady obstetrician	08	01
6	Pvt Hospital 4	Urban	Single lady obstetrician	10	01
7	Pvt Hospital 5	Urban	Single male obstetrician	08	01
8	Pvt Hospital 6	Rural	Two male obstetricians	20	02
9	Pvt Hospital 7	Urban	Three male obstetricians	20	03
10	Pvt Hospital 8	Urban	3 male, 4 lady obstetricians	60	07

This hospital is being run by 2 male obstetricians. Table 1 shows the features of the maternity homes from which the data was gathered.

To understand the impact of different healthcare facilities, first we need to take into account the working pattern of each hospital included in the study. Amongst the hospitals, first in the list (Table 1) is Women's hospital, a public hospital exclusively for maternity services having 60 beds. Four obstetricians work on rotation basis in this hospital. One obstetrician is responsible for the planned and emergency obstetric work for a period of 24 hours. There are no postgraduate students to help the obstetrician on duty. The duty doctor, who is not an obstetrician, with the help of nursing staff observes the progress of labor. The unwritten rule of the hospital is that the obstetricians on duty

do not stay in the hospital campus; attend the patients whenever called for. The duty doctor works for 8 hrs by rotation and hands over the patients in labor ward to the next doctor on duty. The obstetricians in this hospital do emergency and planned obstetric work only during day hours. Emergency CS cases are not done in this hospital during night hours; such cases are usually referred to Govt medical college hospital. They do not accept high risk obstetric cases even during day time. The obstetricians in this hospital get help from trained staff. The second hospital in the list is Govt Medical College Hospital, where maternity services are given by a team of postgraduate students, trained nurses, teaching staff headed by Professor of the Department of Obstetrics, having 3 units. Each unit doctors work only two days a week for emergency obstetrics. The hospital accepts all the obstetric admissions 24 by 7. The whole teams of both these public hospitals get relief from the work between the duties.

The hospitals 3, 4, 5 and 6, in the list (Table 1) are small maternity homes from private sector having ten or less than ten beds run by lady obstetricians single handed. Unlike, the doctors in public hospitals, they do not have any fixed schedule. They need to be ready to accept the emergency obstetric patients at anytime of the day and night on all the week days including Sundays. Besides, they attend OPD patients daily. In addition, they have to squeeze time undertaking procedures like MTP, sterilization, evacuation, hysterectomy etc. All of them rely on the untrained staff. Above all, the lady obstetricians 'plan' their own obstetric career, rearing of children and look after domestic front as well. They get exhausted at physical and mental level because of this hectic schedule. There is no division of work for a lady obstetrician running a small maternity home, unlike the obstetricians in public hospital.

The hospital 7 in the list is run single handed by a male obstetrician. His working pattern is almost similar to that of the lady obstetricians except of course the responsibility of his own obstetric career.

The hospital 8 is included in the study to know CS rate of maternity homes located in rural areas. This maternity home is run by two male obstetricians with untrained staff. Unlike the single handed maternity homes the routine and emergency obstetrics and gynecology work is divided amongst the two, so that there is some relief to the other when one is on duty.

The institute 9 is run by three male obstetricians together. They too work with untrained staff. It is a bigger maternity home having 30 beds. Unlike the single handed lady obstetricians and single handed male obstetrician, they have the advantage of doing emergency work in rotation so as to get some relief from nonstop working. They too work with untrained staff.

The hospital 10 is biggest maternity home in the town in private sector having 60 beds, where 7 obstetricians (3 male and 4 lady) work together. The responsibility of lady obstetricians is to look after OPD and labor room and that of male obstetricians is to undertake work in operation theatre. The obstetricians in this hospital get the advantage of getting relief from the duties as they work in rotation. Majority of the staff in this hospital is also untrained. This hospital also provides the facility of ART.

In other words, the environment around the obstetricians working in public hospital is more comfortable as compared to their counterparts in private sector, because the formers work in rotation with trained staff and later work all the time with untrained staff.

OBSERVATIONS:

The CS rate in the Govt medical college was 38.00% and that in another public hospital (Women's Hospital), was 24.58% (Table 2). In remaining 8 hospitals from private sector the percentage of CS in maternity homes run single handed by lady obstetricians was between 32.80% up to 66.84%. It was 94.16% in a maternity home run by single handed male obstetricians, and 63.11% in a maternity home run by three male obstetricians working together. A maternity home run by seven obstetricians (3 male and 4 lady obstetricians) working together the CS rate was 60.93%. The CS rate was 47.94% in a maternity home from rural area run by two male obstetricians (Table 2).

Table 2: Table: CS rates in Public and Private Hospitals

Name of Hospital	Total number of deliveries	Total number of vaginal births	Total number of Caesarean Sections (%)
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WH	1733	1307	426(24.58)
GMCH	8286	5137	3149(38.00))
Pvt Hosp 1	425	194	231(54.35)
Pvt Hosp 2	190	63	127(66.84)
Pvt Hosp 3	189	127	62(32.80)
Pvt Hosp 4	278	119	159(57.19)
Pvt Hosp 5	120	007	113(94.16)
Pvt Hosp 6	707	368	339(47.94)
Pvt Hosp 7	553	204	349(63.11)
Pvt Hosp 8	1024	400	624(60.93)

DISCUSSION

In the present study the caesarean section rate was more than the WHO recommendations in all the 10 institutes which include both public and private hospitals (1, 2). The literature shows that the CS rate is more in private sector as compared to public sector (3). Our observations too go along the same lines. The worrisome observation in our study is that the CS rate of public hospitals is no way close to the percentage recommended by WHO. As we compare the CS rate within the public hospitals, we found that the CS rate is one and half times more in GMCH as compared to WH. It is the impact of the policy adopted by WH of not accepting high risk cases and not to undertake CS during night hours. The working pattern and the environment of the obstetricians within two public hospitals are different. Such factors do influence the CS rate within public hospitals.

In private sector, amongst the four small maternity homes run single handed by lady obstetricians, the percentage is more than double when two hospitals, Pvt Hospital 3 against Pvt Hosp 2 compared (Table 2). The percentage of CS rate is observed to have wide range amongst hospitals run by single handed lady obstetricians. The maternity homes where more than one obstetrician work together have advantage of working in rotation thereby getting some relief in duties. The obstetrician in such hospital can wait more patiently to monitor the progress of labor for vaginal birth to occur. It is expected that in those maternity homes where more than one obstetrician is working CS rate would be comparatively less. It does not seem to be happening in our study. In other words manpower and effect on CS rate, either male or female obstetricians do not seem to make effect as the CS rate. In private sector, neither the gender of the obstetrician nor the factor of working single handed nor together in group have hardly any impact on CS rate. We observed the CS rate to be less in one of the private maternity homes as compared to what is observed in Govt MCH. Such singular observation in a pilot study may not lead to any conclusion but certainly stimulates to look into the factors, when studies on larger scale would be undertaken. Such observations in our study match to the conclusion of Bertran A. P. that the main drivers of this trend are still unclear and controversial (4).

The majority of the maternity homes in Nanded are run by lady obstetrician single handed with untrained staff. They need to work in a situation where monitoring of labor for vaginal birth leads to uncertainty in respect of the safety of the baby to be born and the time duration required. This fear of uncertainty, accountability makes the obstetricians CS friendly. Non availability of facility to monitor labor by CTG machine, no availability of in house anesthesiologists for epidural labor analgesia in majority of the small maternity homes from private sector and in some public hospitals are some more factors lead to a situation to end the uncertainty of child birth and make a decision in favor of CS. According to Cheng YW, Snowden JM, et al (5), along with the medical indications, the factor like the obstetricians' environment has got the impact on the decision making in favor of CS. Our observations of the present study done at a district place in western part of India are similar to the results of the study carried out in the US.

CONCLUSION:

The CS rates in public hospitals are also on rise despite having better infrastructure. The CS rate observed in GMCH is more than twice than the recommended rate by WHO. The doctors and staff (trained) in public hospitals work with a schedule. This arrangement provides division of work on the part of obstetricians in public hospitals. On a particular day, obstetricians are assigned the job of managing only patients in labour room. They get an opportunity to pay more attention to observe the progress of labour. In public hospitals, especially GMCH, junior obstetricians get guidance from the seniors. There is provision of a sort of getting an inbuilt second opinion in the decision making of CS. Still, we find the CS rate in public hospitals to be on rise, indicating some other factors responsible for this rise.

It is needless to reemphasize that we need to bring down the CS rate in private sector. In private sector the factor of gender of the obstetrician or their working pattern (single handed or in group) do not have any impact on CS rate.

The results of such studies carried out on a larger scale will bring forward different 'drivers' of the rise in CS rate. It is necessary to examine the obstetricians' environment in both public and private sector hospitals providing maternity services. It may be easier to do so in public hospitals as there is some hierarchy in the department. But, the private sector, which is rather not well organized, it is difficult to implement a common protocol which would encourage vaginal births. The small maternity homes run by single handed lady obstetricians are more in number. We do not have protocol to restrict CS rate.

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