ORIGINAL ARTICLE CODEN: AAJMBG

Caesarean section our experience

Geeta Choudhari[1*] and Aishwarya Choudhari[2]

[1]Department of Obstetrics and Gynaecology, Al Ameen Medical College and Hospital, Athani Road, Vijayapur-586108 Karnataka, India and [2]Department of Obstetrics and Gynaecology, S. Nijalingappa Medical College, Navanagar Bagalkot-587 102 Karnataka, India

Received: 08th August 2019; ***Accepted:*** 25th September 2019; ***Published:*** 01st October 2019

Abstract: *Background:* Lower segment caesarean section (LSCS) is the most commonly performed obstetric operation worldwide. It is relatively safe due to advent of modern anaesthesia, improvised surgical techniques, and use of prophylactic antibiotics. *Aim:* To identify the various indications of lower section caesarean section (LSCS) and estimate their proportion. *Materials and Methods:* The prospective study was carried out in the department of Obstetrics and Gynaecology, Al Ameen Medical College Vijayapura Karnataka from January 2015 to December 2016. *Results:* In prospective 100 cases of deliveries, 67% were normal and 33% cases underwent LSCS out of which 20 cases (60.6%) were emergencies and 13 cases (39.4%) were elective. Most common cases occur between 26-30years (46%), followed by 21-25years (43%). 58% cases were primigravida, 28% were second gravida and 13% were 3rd gravida. 63 patients presented at >38 wks while, 30 presented at 34-38 wks. Only 7 came before 34 weeks. Previous LSCS accounted for the highest indication for LSCS at 33.3% i.e. 11 cases, followed by fetal distress and eclampsia at 12.12% each, i.e. 4 cases each. The lowest indication was bad obstetric history at 3% i.e. 1 patient only. *Conclusion:* Incidence of caesarean section high, so encouragement should be given to trial of labour in selected low risk cases and in Primi patients whenever possible.

Keywords: Caesarean Section, Delivery, LSCS.

Introduction

Caesarean section is one of the commonly performed major abdominal surgical procedures in obstetrics and is certainly one of the oldest operations in surgery. It is life saving for mothers and fetus by providing alternate routes of delivery [1]. It is associated with a corresponding level of risk and should be performed in the presence of specific and clearly defined indications while some of the obstetricians consider it to be quite simple, efficient, safe and psychologically well-tolerated procedure and far superior to secondary interventions such as vacuum delivery or emergency cesarean section [2]. One of the most dramatic features of modern obstetrics is the increase in the caesarean section rate [3].

In recent years, the caesarean section rate has increased in different parts of the world, both in developed and developing countries. There is an increased trend in both primary and repeat caesarean section rates. The reasons for the increase are multifaceted. Fetal distress, especially its detection by continuous electronic fetal monitoring, more liberal use of caesarean section for breech presentation and improved safety of caesarean section are commonly cited causes [4].

At present there is no strictly defined protocol for the indication of LSCS in India. Caesarean section is usually performed to ensure safety of the mother and child under conditions of obstetric risks. This medical intervention is more or less justified under certain circumstances such as breech presentation, dystocia, previous caesarean section and suspected fetal compromise [5].

According to the RCOG, the indications are grouped in four categories as urgent, emergency, scheduled and elective caesarean section [6]. In India, giving birth on an auspicious day is driving women to go for caesarean for request [7]. WHO indicated that

a caesarean section rate greater than 10-15% is not justified in any region of the world [7]. They reviewed 110,000 births from nine countries in Asia during 2007-2008, 27% births were delivered by caesarean section. India had 18% incidence. The WHO's recommendation is that primary caesarean sections to be kept at less than 15%. In Kerala, this is 30% [8].

The present study was conducted to identify the various indications of lower section caesarean section (LSCS) and estimate their proportions.

Material and Methods

This prospective study was carried out in the Obstetrics and Gynecology Department, Al Ameen Medical College Vijayapura Karnataka from January 2015 to December 2016. J.M.C. is a tertiary care centre having a large number of referral cases (unbooked patients) from city as well as from periphery and provides antenatal care and delivery services to low and high risk booked pregnant women.

Technically, booked mothers were defined as those who had at least three antenatal visits at our center while unbooked mothers included those who had no or less than three prenatal care visits during their whole pregnancy at our center and those who were referred in emergencies from other medical centers and hospitals. During this period the total numbers of deliveries were counted and out of these, the patients who underwent LSCS were selected. The indications for LSCS in these cases were noted along with the age of the patient, weeks of gestation and situation were analyzed. According to urgency they were grouped as emergency or non-emergency cases. Informed consent was obtained from all study subjects. As the study was descriptive observational so no statistical analysis was needed.

Inclusion criteria: All booked as well as unbooked cases visited for delivery.

Exclusion criteria

- Cases with incomplete data.
- Cases with medical problems like thyroid disorders, diabetes, hypertensive disorders and other heart disease
- Estimated fetal weight more than 4 kg by USG
- Unwilling patients
- Referred patients

Results

Table-1: Types of Delivery

Type of Delivery	No. Of cases	Percentage
LSCS	33	33%
Normal	67	67%
Total	100	100

Most of the deliveries were normal accounting for 67% while LSCS accounted for 33% of the 100 cases.

Table-2: LSCS based on urgency

	Number of cases	Percentage
Emergency	20	60.6
Elective	13	39.4
Total	33	100%

20 of the 33 cases were emergency at 60.6% while 13 were elective at 39.4%

Table-3: Distribution of LSCS according to age groups

Age in years	Number of cases	Percentage
<20 yrs	3	3
21-25	43	43
26-30	46	46
31-35	4	4
36-40	3	3
>40	1	1
Total	100	100

Most of the cases belonged to the 26-30 age group, i.e. 46 while 43 belonged to 21-25. The least number of cases belonged to the >40 group at 1.

Table-4: Distribution according to history of pregnancy		
	Number of cases	**Percentage**
Primi Gravida	58	58
Second Gravida	28	28
3rd Gravida	14	14
Total	100	100

Most of the cases were primi, while 28 were secondary. Tertiary gravid patients were 14

Table-5: Distribution according to weeks of pregnancy		
Week of pregnancy	**No. Of cases**	**Percentage**
<34 wks	7	7
34-38 wks	30	30
>38 wks	63	63
Total	100	100

63 patients presented at >38 wks while, 30 presented at 34-38 wks. Only 7 came before 34 weeks.

Table-6: Distribution according to indication for LSCS		
	No. Of cases	**Percentage**
Previous LSCS	11	33.3
Foetal Distress	4	12.12
Breech Presentation	3	9.1
Eclampsia	4	12.1
CPD	2	6.1
Placenta Previa	2	6.1
BOH	1	3
Twins	3	9.1
On request	3	9.1
Total	33	100%

Previous LSCS accounted for the highest indication for LSCS at 33.3% ie 11 cases, followed by fetal distress and eclampsia at 12.12% each, i.e. 4 cases each. The lowest indication was bad obstetric history at 3% i.e. 1 patient only.

Discussion

This is a retrospective study of 100 cases of Caesarean section undergone at Obstetrics and Gynecology Department, Al Ameen Medical College Vijayapura Karnataka from January 2015 to December 2016. 33 cases (33%) underwent LSCS while 67% underwent vaginal delivery. Amongst the LSCS cases, 20 cases (66.6) underwent emergency LSCS, while the remaining opted for elective Caesarean Section. While study conducted by Sharma et al shows 31.1% cases underwent LSCS, 68.9% underwent vaginal delivery [9]. Sakael TM et al, conducted a hospital based study from 2001-05 which showed that proportion of Caesarean section cases were 32.6% [10].

Out of 33 LSCS cases, 11 (33.3%) underwent repeat LSCS, whereas in 66.7%, primary LSCS was carried out. Sharma et al had shown similar results where repeat caesarean section stood at 33.3% and primary C-section at 66.5% [9]. Similar observations are made by Haider G et al at. [11]. Manasi, patnaik et al found in their study, that out of the 538 patients, 43.22% were in the age group 26-30 yrs, while 35.87% were >35, 1.49% were less than 20 and 0.37% were more than 40 [7]. Badge et al showed that more than half of mothers were in the 19-24 yrs group (53.3%) while the 25-30 yr age group constituted 42% [1].

Indications:

1. *Previous LSCS:* In the present study, max numbers of LSCS cases were done for those with a previous LSCS, which was a significant 33.3%. This is comparable with a study conducted by Sharma et al where the percentage was 33.3% and Bade et al where the percentage was 32% [9]. After one LSCS, there is a 67% chance of having repeat caesarean delivery [12]. The low threshold for performing VBAC is probably due to fear of uterine rupture in labour which is 5.2/1000 compared with 1.6/1000 ERCD (elective repeat caesarean delivery) and it can be

catastrophic leading to perinatal death (1/1000) and very rarely maternal death 1 Lydon, Mozarke, Rageth, et al. [13-15]. Kathe Rajshree D et al found that proportion of previous LSCS was 45.8% and CPD was 4.64%. (16). Nikhil Anand et al, found that previous LSCS was indication in 48.9% cases and CPD in 6.32% cases [17].

2. *Foetal distress:* Foetal distress was the next most common indication at 12.1% with 4 cases. Leverus et al published in the NEJM, confirms higher caesarean section rates for foetal distress with no significant difference in the perinatal mortality rates in the caesarean vs vaginal, route of delivery. [18]. In our study, 12.1% cases of caesarean section were due to eclampsia in PIH. Roth W et al motioned that Recurrent seizures refractory to medical management, Refractory severe hypertension >160/110 mm of Hg, Maternal or foetal deterioration without impending delivery and Severe Pre eclampsia with unfavourable cervix at <30 wk gestation are usually the patients requiring a surgical interference [19].

Vaginal delivery is generally preferable but in cases of extreme prematurity or foetal compromise caesarean section is more likely [20]. Study conducted by Badge et al Eclampsia and preeclampsia were the indications for LSCS in 19.3%, and 8.6% cases [3]. Katke Rajshree D et al found that proportion of PIH as a indication of LSCS in 8.86% cases [16].

3. *Breech:* In our study 91% of cases were due to breech presentation. Study conducted by Badge et al, breech presentation was seen in 3.3% cases [1]. In a study conducted by Badge et al, mentioned breech presentation in 2.9 cases for LSCS [1]. In our study, CPD, Placenta Previa, twins, BOH account for 6.1%, 6.1%, 9.1% and 3% respectively. Study conducted by Badge et al shows CPD, to account for 4.6%, twins for 2.6%, and Placenta Previa for 1.3% [1].

4. *Maternal Request:* Maternal request accounted for 9.1% of the total patients [1]. In India, day and time of birth have astrological significance. Through caesarean delivery, many parents have their baby at this auspicious moment. Deepavali, Janmashtami and New year are such auspicious days [9]. Patients from higher socio-economic strata or who were graduate and office workers had personal requests of getting LSCS done accounting for 1.3% in Feng et al's study because it was feasible, less time consuming and did not want to undergo much trauma and risk [21].

Repeat Caresarean Sections contributed 29%, presumed foetal distress contributed 22%, failure to progress in labour contributed 20%. 88% of breech babies, low birth weight 39% and maternal choice (7%) [22]. Other studies showed that the main indications of c-section was repeat c-section (34.3%), failure of progress (19.3%), and foetal distress (12.9%) [23]. Another study showed repeated caesarean sections decreased about 2.95%, over the period of 8 yrs [24].

Conclusion

In our study we reported that most of the deliveries were normal accounting for 67% while LSCS accounted for 33%, most of c-section were done under emergency basis (60.6%). Most of the cases belonged to the 26-30 age group & most of the cases were primi.

Previous LSCS accounted for the highest indication for LSCS followed by fetal distress and eclampsia.

Financial Support and sponsorship: Nil

Conflicts of interest: There are no conflicts of interest.

References

1. Badge VL et al. Assessment of indications of Lower section Caesarean section at a tertiary care centre: a cross sectional study. *International Journal of Community Medicine and Public Health.* 2017; 4(4):1253-1256.

2. Schindl M, Birner P, Reingrabner M, Joura E, Husslein P, Langer M. Elective cesarean section vs. spontaneous delivery: a comparative study of birth experience. *Acta Obstet Gynecol Scand.* 2003; 82:834-840.

3. Barber EL, Lundsberg LS, Belanger K, Pettker CM, Funai EF, Illuzzi JL. Contributing indications to the Rising Caesarean Delivery Rate. *Obstet. Gynecol* 2011; 118(1):29-38.
4. Lee SL, Khang YH, Lee MS. Womens attitudes toward mode of delivery in South Korea: a society with high cesarean section rates. *Birth* 2004; 31:108-116.
5. World Health Organisation. Monitoring emergency obstetric care: a handbook. Geneva, Switzerland. *WHO* 2009.
6. Royal College of Obstetricians and Gynaecologists Clinical effectiveness support unit. The National Sentinel Caesarean section Audit report. *London: RCOG Press;* 2001; 49-53.
7. Patnaik M et al. Retrospective observational study of caesarean section cases in a tertiary care hospital in Odisha. *Indian Journal of Obstetrics and Gynaecology Research* 2017; 4(2):112-115.
8. Moni M, Thangam A, Thanganadar, Yesubaktan SJ. A study on obstetric profile of mothers undergoing primary caesarean section and their neonatal outcome in a tertiary care centre, South Kerala. *International Journal of Biomedical and Advance Research* 2015; 6(12):835-838.
9. Sharma N et al. Study of Incidence, Trends and Determinants of Caesarean section in tertiary care hospital of Rajasthan, India. *International Journal of Reproduction, Contraception, Obstetrics and Gynaecology* 2018; 7(7):2672-2676.
10. Sakael TM, FreitasI PF, d'OrsiII E. Factors associated with cesarean section rates in a university hospital. *Rev. Saúde Pública* 2009; 43(3):01-11.
11. Haider G, Zehra N, Munir AA, Haider A. Frequency and indications of cesarean section in a tertiary care hospital. *Pak J Med Sci.* 2009; 25(5):791-796.
12. Thomas J, Paranjothy S. Royal college of Obstetrician and gynaecologist: Clinical effectiveness and support unit. *The Nation Sentinel LSCS Audit report London. RCOG press,* 2001.
13. Lydon-Rochelle M, Holt VL, Easterling TR, Martin DP. Risk of uterine Rupture during labour among women with a prior caesarean delivery. *N Engl J Med* 2001; 345:3-8.
14. Mozurkewick EL, Hutt on EK. Elective repeat caesarean delivery versus trial of labour: A meta-analysis of literature from 1989 to 1999. *Am J Obstet Gynecol* 2000; 183:1187-1197.
15. Rageth JC, Juzi C, Grossenbecher H: Delivery after previous caesarean: A risk evaluation. Swiss working group of Obstetrics and gynaecologic Institutions. *Obstet Gynecol* 1999; 93:332-337.
16. Katke RD, Zarariya AN, Desai PV. LSCS audit in a tertiary care center in Mumbai: to study indications and risk factors in LSCS and its effect on early perinatal morbidity and mortality rate. *Int J Reprod Contracept Obstet Gynecol* 2014; 3:963-968.
17. Nikhil A, Desai A, Kansara V, Patel S, Kagathra B, Patel R. Analysis of Trends in LSCS Rate and Indications of LSCS: a Study in a Medical College Hospital GMERS, Sola, Ahmedabad. *International Journal of Pharmacy & Bio-Sciences* 2015; 2(1):15.
18. Khumpradit S, Patermanond J, Tanichasri C. Risk indicators for caesarean section due to cephalopelvic disproportion in Lamphun hospital. *J Med Assoc Thai* 2005; 88 (Suppl 2): S63-8.
19. Rath W, Fischer T. The diagnosis and treatment of hypertensive disorders of pregnancy. *Dtsch Arztebl Int* 2009; 196(6):514 e1-e9.
20. Levens KJ, Cunningham FG, Nelson S, Roark M, Williams ML, Guzick D, et al. A prospective comparision of selective and universal electronic foetal monitoring in 34,995 pregnancies. *N Engl J Med.* 1996; 315:615-619.
21. Feng XL, Xu L, Guo Y, Ronsmans C. Factors influencing rising caesarean section rates in china between 1988 and 2008. *Bull World Health Organization* 2012; 90(1):30-9A
22. Nazneen R et al. Rising trend of Caesarean Section in a tertiary Hospital over a decade. *Journal of Bangladesh College of Physicians and Surgeons* 2011; 29(3):126-132.
23. Amu O, Rajendran S, Bolaji I. Should doctors perform an elective caesarean section on request? Maternal choice alone should not determine method of delivery. *BMJ* 1998; 317:463-465.
24. Salma R, Sehereen FS, Md. Anwar HM, Anwara B. The rising trend for caesarean birth rate in a tertiary referral and teaching hospital. *Bangladesh J Obstet Gynaecol* 2000; 15(1):1523.

Cite this article as: Choudhari G and Choudhari A. Caesarean section our experience. *Al Ameen J Med Sci* 2019; 12(4):205-209

*All correspondences to: Dr. Geeta Choudhari, Associate Professor, Department of Obstetrics and Gynaecology, Al Ameen Medical College and Hospital, Athani Road, Vijayapur-586108 Karnataka, India. Email: geetac345@gmail.com