

# Increasing Trend of Caesarean Section in Patan Hospital

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## ABSTRACT

**Introduction:** Caesarean section has been in rising trend every day by day. The study was done to find out the rate of caesarean section and its indications.

**Methods:** This was a retrospective study conducted from January 2010 to December 2014. All cases were reviewed through the records regarding the indications of caesarean section.

**Results:** Out of 44713 deliveries, 18718(41.9%) had caesarean section. The rate of caesarean section was 38.4% in 2010 which increased to 46.9% in 2014. The most common indication for caesarean section was cephalo-pelvic disproportion (19.9%).The next common indication was previous caesarean section (16.5%).

**Conclusion:** The study concluded that there is an increasing trend of caesarean section due to various causes.

**Keywords:** caesarean section, indications, trend of caesarean section

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## INTRODUCTION

The objective of caesarean section in the ancient world was mainly postmortem delivery of dead or alive fetus.<sup>1</sup> The rate of caesarean section has been increasing in developed countries in last 30 years.<sup>2</sup> Even in developing countries the rate of caesarian section has been high up to 25%.<sup>3</sup> World Health Organization states the rate not to be above 10-15%.<sup>4-5</sup>

Many studies have shown that caesarean section does not improve neonatal morbidity and mortality but increase the maternal complications.<sup>6</sup> Rates above 15% seem to do more harm than good (Althabe and Belizan 2006). The national cesarean section rate was 4.5% in 1965 which has increased to 32.8% in 2010 and 2011. (Hamilton et al 2012). So one mother in three now gives birth by cesarean section.

Progressive increase in caesarean delivery is a matter of concern globally. In this study, we intended to review the indications of the caesarean section.

## METHODS

This was a retrospective study done to know the rate and the different indications leading to the rise in the trend of caesarean section in Patan hospital. The study was conducted in Patan hospital from January 2010 to December 2014. Ethical approval was taken from institutional review committee of Patan hospital. Data regarding total deliveries and its indications were taken through Performa. All data were analyzed by using statistical package SPSS.

## RESULTS

A total of 44713 deliveries were conducted in our department during the study period. Normal vaginal deliveries accounted for 56.8%(25403) of all deliveries, 41.9%(18718) were caesarean section, 1.1%(493) were vacuum delivery and 0.2%(99) was forceps delivery (Table1).

Table1: Total deliveries in 2010-2014

|                  |       |       |
|------------------|-------|-------|
| Normal delivery  | 25403 | 56.8% |
| Cesarean section | 18718 | 41.9% |
| Vacuum           | 493   | 1.1%  |
| Forceps          | 99    | 0.2%  |

The rate of caesarean section has increased in last years from 38.4% to 46.9% though the total deliveries are almost same.

Table2: Total deliveries and caesarean section in 2010-2014

| Year | Total | Caesarean section | Rates |
|------|-------|-------------------|-------|
| 2010 | 8364  | 3210              | 38.4% |
| 2011 | 9699  | 3658              | 37.7% |
| 2012 | 8940  | 3907              | 43.7% |
| 2013 | 9280  | 3991              | 43.0% |
| 2014 | 8430  | 3952              | 46.9% |

The various indications of caesarean section are shown in table 3.

Table3: Indications for caesarean section during study period (2010-2014)

| Indications                  | no   | Percentage |
|------------------------------|------|------------|
| Cephalo-pelvic disproportion | 3729 | 19.9%      |
| Previous caesarean section   | 3087 | 16.5%      |
| Fetal distress               | 2678 | 14.3%      |
| Meconium liquor              | 2301 | 12.3%      |
| Failed induction             | 1843 | 9.8%       |
| Nonprogress of labor         | 1662 | 8.9%       |
| Breech                       | 916  | 4.9%       |
| Severe oligohydramnios       | 843  | 4.5%       |
| Antepartum hemorrhage        | 502  | 2.7%       |
| Twin pregnancy               | 347  | 1.9%       |

## DISCUSSION

In the last 30 years, there has been a sustained increase in the rate of caesarean section and has been a matter of debate regarding its indications.<sup>7</sup> The rates of caesarean section continue to be an issue of great concern to obstetricians and society as a whole.

This study showed the rate of 41.9% during study period (Table1) which is slightly lower than 51.43% as reported by Nazir et al.<sup>8</sup> However it is higher than the reports of other studies.<sup>9-10</sup> The rates of caesarean section in our study was noted to be in an increasing trend as compared to the previous years (38.4% to 46.9%) though the total number of deliveries remained almost the same in last 5 years. In 1985 the WHO stated the rate to be not more than 15%<sup>11</sup> but due to various demographic changes particularly the increasing maternal age a target rate of 22% might be more realistic nowadays.<sup>12</sup> The rate of caesarean delivery is almost equal to normal vaginal delivery that is 46.9% in 2014 (Table2) which is contributed by increasing maternal age, fetal and maternal distress regarding the pregnancy. The risk of severe maternal morbidity are more in caesarean section than in normal vaginal delivery. The rate of caesarean section in 2002-2003 was only 17% in our hospital.<sup>13</sup>

The study showed that the most common indication for caesarean section was cephalo-pelvic disproportion (Table 3), accounting for 19.9% sections which was almost similar 19.2% as reported by Ugwu et al<sup>14</sup> but higher than 14.4% and 9.6% as reported by Shamshad<sup>15</sup> and Geidem<sup>1</sup> respectively. The increase in detection of cephalopelvic disproportion leading to caesarean section maybe due to overvigilance of doctors or increase in rate of big babies.

The second common indication of caesarean section was repeat caesarean section which accounted for 16.5% sections which was lower than that reported by other authors.<sup>1,7,12,16</sup> Scar dehiscence occurs in less than 1% of women undergoing attempted vaginal delivery after a

previous caesarean section.<sup>17,18</sup> In our study fetal distress was 14.3% and meconium stained liquor in early labor was 12.3% which was lower than the study by Chhetri (24.5%).<sup>19</sup> Due to proper intrapartum fetal monitoring by sthetoscope as well as cardiotocograph, labor can be monitored which led to slightly decrease in the incidence of caesarean section for meconium liquor. In our study, failed induction and non-progress of labor was 9.8% and 8.9% which was lower than 12% as reported by Shamshad.<sup>15</sup> The study showed caesarean section for breech in 4.9% which was higher than 2.1% by Ugwu et al<sup>14</sup> but lower than 10.2% by Shamshad.<sup>15</sup>

## CONCLUSION

As the incidence of caesarean section is increasing globally, increase in the trend of caesarean section was noted from this study. Cephalopelvic disproportion was the most common indication for caesarean section.

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