



Caesarean Section Vs Normal Vaginal Delivery

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Author's contribution

Author PA involved in collection of data, editing, organising and reviewing of manuscript.

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ABSTRACT

Aim: To study about caesarean section and normal vaginal delivery cases.

Study Design: It is a prospective observational study.

Place and Duration of Study: Department of gynaecology in Super-speciality hospital. Duration of study is 3 months.

Methodology: It is a prospective observational study. Total of 20 patients were observed. In that 16 were caesarean section patients and 4 were normal vaginal delivery patients.

INCLUSION CRITERIA: Patients who admitted in the hospital for delivery.

EXCLUSION CRITERIA: Patients who did not admitted in the hospital for delivery.

Results: In 16 caesarean section cases, every patients different reasons like breech presentation, oligohydramnios, umbilical cord around the neck of baby, maternal request for c- section, gestational hypertension, etc. The caesarean section cases are increasing every i.e., from 2019-20 it was 20.5% and it was to 25% in 2022-23. In 4 Normal vaginal delivery cases, one had previous NVD and others have no severe complications. NVD cases are decreasing every year.

Conclusion: Total 20 patients were observed. 16 were caesarean section and 4 were normal vaginal delivery.

Caesarean section cases are increasing as a belief that c –section is safe and many other reasons like breech presentation, oligohydramnios, placenta previa, etc and gradually NVD cases are decreasing.

Keywords: *Caesarean section; normal vaginal delivery; mother; baby; delivery.*

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ABBREVIATIONS

NVD: (Normal Vaginal Delivery),
C-Section: (Caesarean Section).

1. INTRODUCTION

1.1 Caesarean Section

Caesarean section or C- section is a surgical procedure for delivering a foetus or baby by an opening of abdomen and uterus [1].

The layers involved caesarean section [1]:

- Skin
- Fat
- Rectus sheath
- Rectus abdominis
- Abdominal peritoneum
- Pelvic peritoneum
- Uterine muscles

Health Management Information System (HMIS) reports that in 2019-2020 the caesarean section deliveries was 20.5%,in 2020-2021 the caesarean section deliveries was 21.3% and in 2021-2022 the caesarean section deliveries was 23.29% [2].

Telangana reports, the highest c- section percentage of deliveries [2].

1.2 Classification of C- Section

Caesarean section is classified into Elective and Emergency [3].

1.3 Elective Caesarean Section

It is planned caesarean section if following indications are present:

- sTwin pregnancy: When first twin is not in cephalic position.
- Foetal compromise: When the foetus cannot tolerate labour.
- Breech presentation and other malpresentations.
- Maternal health condition: If mother had cardiomyopathy, c- section is not considered as it dangerous to the mother.
- Transmissible disease like HIV, Syphilis, etc.
- Placenta previa.

- Previous caesarean less than 3-4 years.
- Foetal macrosomia: If foetus weighs more than 4500gms [4] (mainly if mother is diabetic)
- Maternal request: If the mother request for the caesarean section as she had any previous experiences of c -section or fear of vaginal delivery or belief of safe delivery.
- Increased IVF conceived patients.
- Increased incidence of maternal age and other pregnancy related complications like gestational DM and preeclampsia.

1.4 Emergency Caesarean Section

INDICATIONS [5]:

- Foetal or maternal distress.
- When the umbilical cord drops in the vagina (prolapsed umbilical cord).
- Haemorrhage (maternal).
- When the placenta comes from the uterus wall (placenta abruption).
- When the uterus rupture on the last or previous scar of c -section. Caesarean section risks.

1.5 Caesarean Section Risks [6]

MOTHER:-

- Blood clots
- Haemorrhage
- Anaesthesia effects
- Infection
- Amniotic fluid embolism
- Risks for future pregnancies
- Uterus inflammation
- Chronic pelvic pain [7]
- Recovery difficult [7]

BABY:-

- Breathing problems are rare.
- Foetus injury.

1.6 Caesarean Section Benefits [8]

When the vaginal delivery is risk to the mother and baby or either mother or baby, choosing caesarean section is safe.

1.6.1 Normal vaginal delivery

Delivering a foetus through vagina is known as vaginal delivery. The uterus contracts and opens the cervix and pushes the baby out of vagina [9].

1.6.2 Vaginal deliveries types [10]

There are three types of vaginal deliveries:

➤ Spontaneous vaginal delivery

Delivery happens on own without any labour inducing medications at 40 weeks.

➤ Induced vaginal delivery

Induces labour and opens cervix by drugs like oxytocin (Pitocin) or other techniques.

➤ Assisted vaginal delivery

Vacuum device or forceps is used to get foetus out of the vagina.

1.6.3 Labour [9]

Labour begins with contractions of uterus and 10cm dilation of cervix and 100% effaced.

1.6.4 Classification of labour

- **Early labour:** Cervix starts dilation for about 5cm and becomes thin.
- **Active labour:** Contractions are strong at this stage. Every contraction is up to a minute.
- **Transitional labour:** This is before the cervix gets 10cm dilation. It lasts more than a minute.

1.6.5 Delivering of baby [9]

At this point the cervix dilates more than 10cm. Mother experiences very strong contractions. Slowly the baby comes out of vagina and then cervix. The umbilical cord which is a connection between baby and placenta is cut [11].

1.6.6 Delivering of placenta [11]

After delivering of baby the uterus contractions continue until the placenta gets delivered out within 5min or it takes longer time. Entire removal of placenta is essential otherwise it leads to bleeding and it affects next pregnancy.

1.6.7 Normal vaginal delivery risks [12]

MOTHER

- Time of birth is uncertain.
- Painful and stressful. It may last for few hours.
- Chances of drop in baby's HR, in this situation, immediately plans for emergency caesarean section.

BABY

- If baby is more weight or large, uses cups or forceps to delivery.
- Sometimes the baby gets injured when passing through the vagina and cervix.

1.6.8 Normal vaginal delivery benefits¹²

MOTHER

- Recovery after delivery is fast. They can walk with no pain on the day or next.
- No scars and no need for sutures.
- Skin to skin contact improves mother and baby bonding.

BABY

- When the mother pushes the baby out, the baby's lungs expel the amniotic fluid. So this helps in minimal respiratory problems.

2. METHODOLOGY

It is a prospective observational study. Totally 20 patients were observed during the period of 3 months i.e., May 2023- July 2023 in Super-speciality hospital in Gynaecology department.

2.1 Inclusion Criteria

Patients who admitted in the hospital for delivery.

2.2 Exclusion Criteria

Patients who did not admitted in the hospital (normal vaginal delivery at home).

3. RESULTS

3.1 Caesarean Section

I have studied 16 caesarean patients over period of 3 months in a Super-speciality hospital in Gynaecology department.

The following are the reasons why the mothers has chosen caesarean section delivery:

Super-speciality hospital in Gynaecology department.

In the below graph, it shows that every year caesarean section cases are increasing¹. In 2019-2020, it was about 20.5% and in 2022-2023, it was increased to 25%.

The following conditions observed in patients or mothers who have chosen NVD:

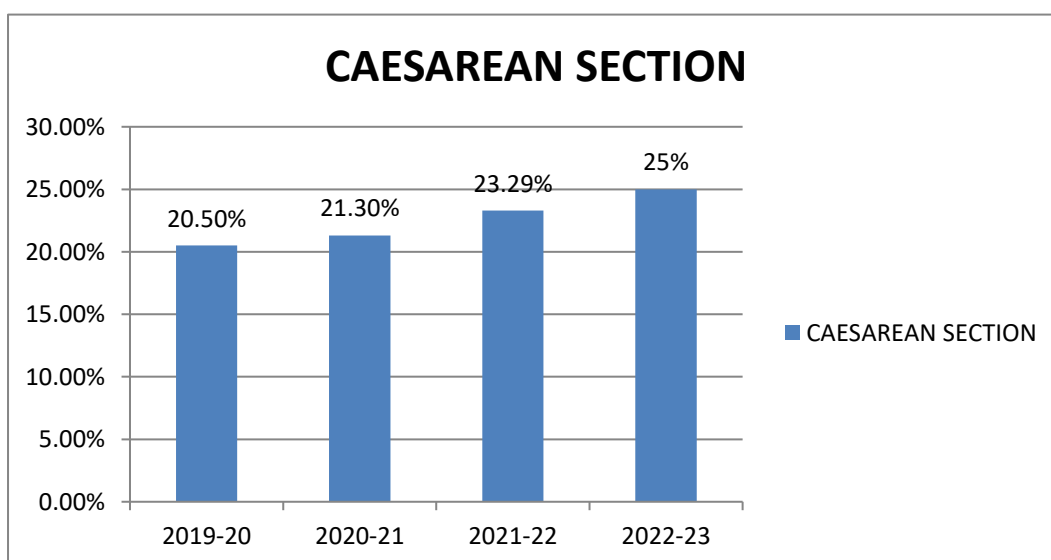
3.2 Normal Vaginal Delivery

In the below chat, comparison was made between NVD and C-Section. Only 20% NVD cases were observed every year when compared to C-Section cases, it was 80%. The NVD cases are decreasing by every year [1].

I have studied or observed four patients or mother who undergone normal vaginal delivery in

Table 1. Reasons for caesarean section

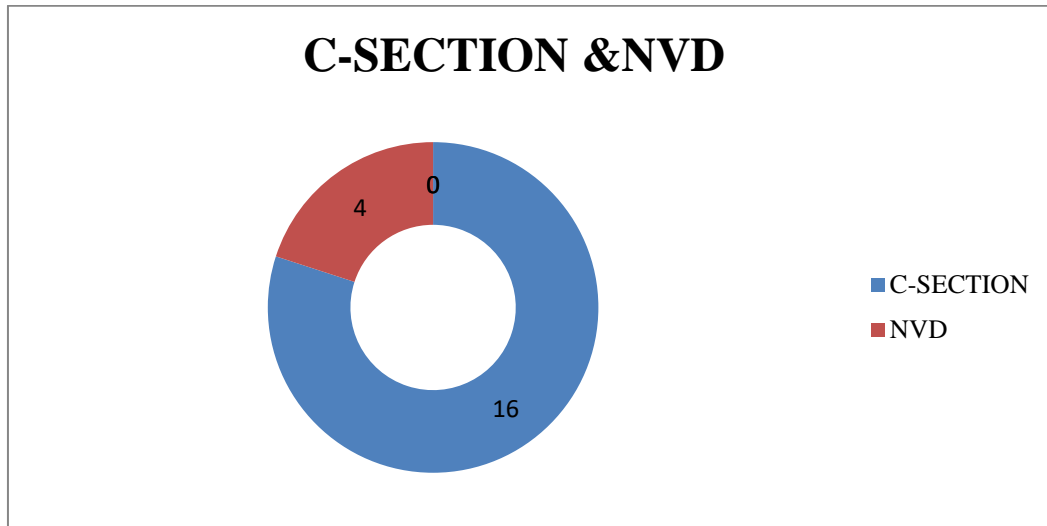
Number of patients	Reasons for caesarean section
2 patients or mothers	Maternal request: Fear of normal vaginal delivery or belief that c- section is safe
2 patients or mothers	Umbilical cord 360° around the neck
1 patient or mother	Macrosomia (baby over weight)
1 patient or mother	Preterm delivery (before 37 weeks)
1 patient or mother	Placenta previa
4 patients or mothers	Oligohydromnios (low amniotic fluid)
2 patients or mothers	Previous caesarean section
1 patient or mother	Gestational hypertension
2 patients or mothers	Breech presentation
1 patient or mother	Amniotic membrane rupture (Amniotomy)



Graph 1. Yearly increase in Caesarean Section cases

Table 2. Reasons for normal vaginal delivery

Number of patients	Reasons for NVD
1 patient or mother	Term gestation, no complications and primi
1 patient or mother	Primi, Hypothyroidism
1 patient or mother	Previous of C-section and the time gap is more than 6 years
1 patient or mother	Previous NVD



Graph 2. Comparison of C-Section and NVD cases

4. DISCUSSION

The study is performed at the super- speciality hospital in Gynaecology department over a period of 3 months.

In this study, total 20 patients were observed over 3 months. 16 patients had undergone caesarean section and 4 patients had undergone normal vaginal delivery.

4.1 Caesarean Section

16 caesarean section patients were observed. In that, 2 patients -Maternal request, 2 patients- Umbilical cord 360° around the neck [2], 1 patient or mother- Macrosomia (baby over weight) [4], 1 patient or mother – Preterm delivery (before 37 weeks), 1 patient or mother- Placenta previa, 4 patients or mothers- Oligohydromnios (low amniotic fluid) [3], 2 patients or mother– Previous caesarean section, 1 patient or mother– Gestational hypertension, 2 patients or mother – Breech presentation [3], 1 patient or mother– Amniotic membrane rupture (Amniotomy) [5].

4.2 Normal Vaginal Delivery

4 normal vaginal delivery were observed. In that, 1 patient or mother- Term gestation, no complications and primi, 1 patient or mother- Primi, Hypothyroidism, 1 patient or mother- Previous of C-section and the time gap is more than 6 years, 1 patient or mother- Previous NVD. Caesarean section deliveries are increasing day by day [2].

5. CONCLUSION

Total 20 patients were observed. 16 were caesarean section and 4 were normal vaginal delivery.

Caesarean section cases are increasing as a belief that c-section is safe and many other reasons like breech presentation, oligohydromnios, placenta previa, etc and gradually Normal Vaginal Delivery cases are decreasing because of fear of pain and a belief that baby is injured in NVD.

CONSENT

Patient consent was taken for publication of manuscript.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

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COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Sung S, Mahdy H. Cesarean Section. [In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023. Available: <https://www.ncbi.nlm.nih.gov/books/NBK546707/> [Accessed on: 2023 Jul 9].
2. Shuvrajit Biswas, DH Web Desk. Why C-Section deliveries are rising at an alarming rate in India., 17:53 IST and updated on 08 March 2023, 21:11 IST. Available: <https://www.deccanherald.com/india/why-c-section-deliveries-are-rising-at-an-alarming-rate-in-india-1196909.html> [Accessed on: 03 March 2023]
3. Oliver Jones. Caesarean section; 2022. Available: <https://teachmeanobgyn.com/labour//caesarean-section/>.
4. Cleveland Clinic. Fetal macrosomia; 2022. Available: <https://my.clevelandclinic.org/health/diseases/17795-fetal-macrosomia> [Accessed on: 13 May].
5. Traci C. Johnson, MD. Why would I need to have an emergency C- Section. Reviewed on 11 November 2022. Available: <https://www.webmd.com/baby/emergency-c-section>
6. Traci C. Johnson, MD. What are the risks of a C- Section; 2022. Available: <https://www.webmd.com/baby/risks-of-a-c-section> Reviewed on 08 November 2022.
7. Cleveland clinic. C-Section; 2022. Available: <https://my.clevelandclinic.org/health/treatments/7246-cesarean-birth-c-section> [Accessed on: 14 August 2022]
8. Louise Chang, MD. The truth about C-Section; 2010. Available: <https://www.webmd.com/baby/features/the-truth-about-c-sections> Reviewed on 02 February 2010.
9. Cleveland Clinic. Vaginal Delivery. Available: <https://my.clevelandclinic.org/health/articles/23097-vaginal-delivery>. Accessed on: on 26 May 2022.
10. Cleveland Clinic. Pregnancy: Types of Delivery. Reviewed on 07 October 2022. [nic.org/health/articles/9675-pregnancy-types-of-delivery](https://my.clevelandclinic.org/health/articles/9675-pregnancy-types-of-delivery).
11. Stacy A Henigsmann, DO, Rachel Nall, MSN, CRNA. Placenta Delivery: What to expect. Available: <https://www.healthline.com/health/pregnancy/placenta-delivery> [Accessed on: on 20 June 2023]
12. Mrunal, Dr. Sabiha Anjum. Normal delivery Vs Caesarean- Advantages and disadvantages. Available: <https://parenting.firstcry.com/articles/normal-delivery-vs-caesarean-advantages-disadvantages/>

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