

Neonatal Complications According to Methods of Delivery in Alzahraa Maternity Teaching Hospital in at Najaf Alashraf City

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Abstract

Background Globally, the rate of Cesarean section delivery has been steadily increasing during the last two decades. Vaginal delivery is becoming less common as the prevalence of caesarean section rises consistently in many nations. Birth via Caesarean section (C/S) has ramifications for both mothers' and babies' current and future health. The purpose of this research is to identify Neonatal complications outcomes during and after (NVD & CS). **Methodology** A descriptive and analytic study was carried to identify Neonatal complications outcomes during and after (NVD & CS) attending to AL Zahraa Maternity Teaching Hospital in AL Najaf Al Ashraf city. During period from 15th July to 28th December, 2021. Purposive sample of (200) women. (100) have cesarean section and (100) have delivered by normal vagina selected from Hospitals mention above. Use questionnaire format consist of tree part neonatal demographical data and newborn have complications during and after (cesarean section & normal vaginal delivery) dependent on sub items. Results the highest percentage of newborn in the two group (80% NVD vs 88% CS) were the newborns with body weight (> 2500g), (55% NVD vs 62% CS) were have had Newborns of male gender, and (100% NVD vs 98% CS) were have had alive Newborns. That 1% of them Complications during NVD was Cephalohematoma. That Complications was. The ratio of the Newborns who have Complications after CS was more than NVD one (46% CS vs 6% NVD). Newborn Complications after CS, as it showed the fetal first min. APGAR ≤ 7 was for Most Newborns 24% then Hypoglycemia in the rate of 13%. Followed by fetal jaundice in the rate of 12%, fifth min. APGAR ≤ 7 with fetal sepsis in the rate of 5% and fetal death after cesarean section ware 2%. Newborn complications related NVD delivery as it showed the first min. APGAR ≤ 7 was (5%), fetal jaundice was (4%). Followed by fifth min. APGAR ≤ 7 and Hypoglycemia have same rate 2% and for neonatal sepsis of the Newborns have 1%. **Conclusion:** Both groups had a high percentage of male infants and two babies died from CS. No neonatal problems with CS but one (Cephalohematoma) during NVD. After delivery, CS had greater neonatal problems than NVD. Hypoglycemia was APGAR 7, then fetal jaundice (5 min). After cesarean surgery there is fetal infection and fetal death, but neonate issues with NV first min. APGAR ≤ 7 , fetal jaundice, 5 min. Neonatal Sepsis, APGAR ≤ 7 , Hypoglycemia. **Recommendation:** Local strategies and policies should be established and implemented to improve birth outcomes.

Keywords: cesarean section, normal vaginal delivery, neonate, complications

1. Introduction

In the previous two decades, the rate of cesarean births (CDs) has grown. CDs occur at a rate of 50% in pregnancies less than 34 weeks (2.75 percent of all newborns). (Hamilton & et al., 2014)

According to numerous health organizations, physiological birth entails spontaneous vaginal delivery at term with the least amount of technology and medicine and is followed by skin-to-skin contact and an easier delivery breastfeeding experience after delivery (Al-Kareem & et al., 2020).

Numerous studies have shown that normal vaginal delivery has the lowest ratio of any form of birth in the globe. In the United States, it was 22%, 25% in Brazil, and 27% in Chile, while it ranged from 17% to 40% in 19 Latin American nations. The World Health Organization's recommendations state that the rate should not exceed 15% of total deliveries In the

Middle East, nations such as Iran (NVD) had the lowest rate, while other countries such as China (CS) had the highest rate (41.9 percent) in 2008, making it the second highest rate among other countries. In 2012, Isfahan, in southern Iran, had a percentage that was even higher than the national figure (62 percent). (Abd Al-Kareem & Kadhum, 2020).

In the Middle East, nations such as Iran (NVD) had the lowest rate, while other countries such as China (CS) had the highest rate (41.9 percent) in 2008, making it the second highest rate among other countries. In 2012, Isfahan, in southern Iran, had a percentage that was even higher than the national figure (62 percent) (Majida & et al., 2013).

On the other hand, there has been a decrease in the number of normal vaginal deliveries in Iraq as the number of cesarean sections and other deliveries has risen. In 2009, the rate was 24.5 percent; in 2010, it was 25.8 percent. In the private sector, the rate was

much higher, at 75.8 percent and 79.5 percent (Shabila, 2017).

Information on the impact of raising the CVS proportion on lowering newborn problems varies between locations. Aside from an increased fetus and neonate mortality problems comprise an increasing chance of newborn Admission to the intensive care unit, respiratory morbidities, and mother-infant separation are all possible outcomes. Of the repercussions it entails. (Khasawneh & et al., 2020).

C-sections performed on request resulted in less infant trauma during delivery, as well as fewer cases of neonatal infection, hypoxic-ischemic encephalopathy, and meconium aspiration. In comparison, vaginal birth has been linked to a lower prevalence of infant respiratory problems. Operatory vaginal birth and intrapartum C-sections had lower outcomes than vaginal delivery and on-demand C-sections. C-section (Liu & et al., 2015).

Apart from the higher death rate, fetal and neonatal problems include an increased risk of neonatal intensive care unit admission, respiratory morbidity, and mother-infant separation with all its associated issues (Gould & et al., 2004).

Kupari et al. from Finland determined in 2016 that increasing the CS rate did not result in a decrease in

the incidence of newborn hypoxia. Rather than that, their research found that the incidence of NICU hospitalizations was greater after CS births (Gould & et al., 2016).

2. Methodology

A descriptive and analytic study for women during and after (NVD &CS) attending to AL Zahraa Maternity Teaching Hospital in AL Najaf Al Ashraf city was conducted to identify the neonatal complications. During period from 15th July to 28thDecember, 2021. Purposive a sample of (200) women. (100) have cesarean section and (100) have delivered by normal vagina selected from Hospitals. Use Questioner format of the research instrument consist of status of neonate were Body weight for newborn, gender of newborn, Condition of baby and gestational age, if newborn have complication during and after cesarean section dependent on sub items and if newborn have complication during and after vaginal labour according sub items. Also, based on with information's from their hospital case sheets of women it contains diagnosis and laboratory test and investigation

3. Result

Table (1) Statistical Distribution of newborn according to their Demographics Variables. (n=200)

Variable		NVD n=100		CS n=100	
		frequency	%	frequency	%
Body weight for newborn	≤1000g	0	0	0	0
	1000-1500g	2	2	6	6
	1500-2000g	18	18	6	6
	≥ 2500g	80	80	88	88
Gestational age	(≤37)	5	5	14	14
	(38- 42)	95	95	86	86
	(≥42)	0	0	0	0
gender of newborn	male	55	55	62	62
	female	45	45	38	38
Condition of baby	Alive	100	100	98	98
	Dead	0	0	2	2

Table (1) shows that distribution of mothers with two mode of delivery according to their babies data, as it showed that the highest percentage of new born in the two group (80% NVD vs 88% CS) were the newborns with body weight (> 2500g), related gestational age the high percent for gestational age (38-41) was (95% NVD vs 86% CS), The highest percentage of mothers in the two group (55% NVD vs 62% CS) were have had Newborns of male gender, and (100% NVD vs 98% CS) were have had alive Newborns.

Newborn complications after delivery

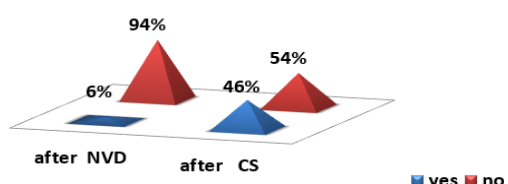


Figure (1) ratio of the newborn who have Complications outcomes after

Figure (1) showed that the ratio of the Newborns who have Complications after CS was more than NVD one (46% CS vs 6% NVD).

Table (2) distribution of newborn complications outcomes during NVD delivery.

Variables	Frequency	%
Cephalohematoma	1	100

Table (2) reveled the distribution of mother's babies with NVD delivery mode according to their Complications during NVD, as it showed that 1% of them have had Complications during NVD. That Complications was Cephalohematoma.

Newborn complications	NVD n= 100		C\S n=100	
	N	%	N	%
Hypoglycemia	2	2	13	13
neonatal sepsis	1	1	5	5
first min. APGAR <7	5	5	24	24
fifth min. APGAR <7	2	2	5	5
fetal jaundice	4	4	12	12
Neonatal deth	0	0	2	2

*There are more than one answer for each choose

Table (3) shows the distribution of newborn complications related NVD delivery as it showed the fifth min. APGAR <7 was (5%), fetal jaundice was (4%). Followed by fifth min. APGAR <7 and Hypoglycemia have same rate 2% and for neonatal sepsis of the Newborns have 1%.

Same table showed the Complications of newborn after CS, as it showed the fetal first min. APGAR <7 was for Most Newborns 24% then Hypoglycemia in the rate of 13%. Followed by fetal jaundice in the rate of 12%, fifth min. APGAR <7 with fetal sepsis in the rate of 5% and fetal death after cesarean section were 2%.

4. Discussion

1-The Demographics Variables related newborn

Concerning newborn weight at birth this result agree with study conducted in in Jordan by [Khasawneh et al \(2020\)](#) which showed the newborn weight at birth cesarean section (> 2500g) were (77%), wherever study by [Shamsa et al \(2013\)](#) who found the percent of newborn weight(2500 – 4000) with NVD (77%) this agree with present study and percent of newborn weight <2500 with CS (54%) that disagree with present study, and this study showed percent 1% neonate dying with CS that agree with present study. In other hand study done by [Obsa et al \(2020\)](#) who reported the percent of newborn male was 54% and neonate weight (> 2500g) was 78% this agreement with the current study.

2-The neonatal complications according to mode of

Concerning newborn weight at birth this result agreement with study conducted in in Jordan by [Khasawneh & et al. \(2020\)](#) which showed the newborn weight at birth cesarean section (> 2500g) were (77%), study done by [Obsa et al \(2020\)](#) who reported the percent of newborn male was 54% and neonate weight (> 2500g) was 78% this agree with present study and percent of newborn weight <2500 with CS (54%) that disagree with present study, and this study showed percent 1% neonate dying with CS that agree with present study .

3- Neonatal complications during vaginal

delivery

1% of them have had Complications during NVD. That Complications was Cephalohematoma or caput succedaneum.

This result was agreement with results by studies [Wang & et al. \(2019\)](#), [Abedzadeh-Kalahroudi et al. \(2017\)](#) and [Mosavat & Zamani. \(2008\)](#) Which showed the percent of Cephalohematoma or caput succedaneum during NVD.

While study conducted by [McKee Garrett \(2013\)](#) showed the risk of cephalohematoma is about 1% to 2% per delivery which support the present study.

4-Neonatal complications after Normal vaginal delivery and CS

The result of study by [Rahmanian et al \(2014\)](#) who revealed the percent of fifth min. APGAR <7 was (4%) after NVD and (2%) after CS. this disagree with the present study, also study by [Fajar et al\(2017\)](#) found the percent of first min. APGAR <7 with NVD (28%) and (7.8%)with CS, related fifth min. APGAR <7 the percent was (32%) with NVD and (1%) with CS these results were inconsistency percent related NVD in current study and less than percent related CS the definitions of percent related to fetal presentation. In addition, A study conducted in Nepal by [Paudyal, L. \(2020\)](#) who revealed the rate of 1st minute APGARE score < 7 on normal vaginal delivery was 11% this and with CS was 13%, while the rate of 5th minutes APGARE score on normal vaginal delivery less than 7 was 6% and with CS (4%), the result related NVD was more than current result of present study and the result with CS was more than the present study.

[Abdissa et al \(2013\)](#) show which found result correspond with the present study.

In regard jaundice after birth the result of current study was less than the study by [Farhat et al \(2016\)](#) Clinical hyperbilirubinemia (bilirubin greater than 5 mg/dl) occurred in 72.2 percent of neonates born with NVD and 74.1 percent of neonates delivered via CS, other study disagree with present result that studies by [Lee & Choi. \(2019\)](#), [Boskabadi & et al \(2014\)](#), [Saber et al \(2013\)](#) and [Baş & et al. \(2020\)](#) which reported that, after a normal vaginal birth, the rate of newborn jaundice is higher than after a cesarean surgery. Concerning problems of neonatal Hypoglycemia after birth was (NVD 2% & CS 13%) these results disagree with research done by [Mitchell & et al. \(2020\)](#) which report that the vaginal birth does not associate with hypoglycemia after birth. Regarding neonatal sepsis after birth the present result agreement with study by [Siakwa et al \(2014\)](#), other study does not correspond with current result that conducted by [Jabiri, et al \(2016\)](#).

The death neonatal after CS was 2% this inconsistency with studies by [Gedefaw et al \(2020\)](#), study by [Prado & et al \(2018\)](#) which revealed that the common neonatal complications after CS early neonatal death

[Júnior et al \(2014\)](#) that significant negative

association between caesareans and newborn death which different with present study, which found 1%.

5. Conclusion

The largest proportion of babies in both groups were those weighing above 2500g and had male. newborns in this study two baby dying with CS and no complications of neonate during CS but just one case (Cephalohematoma) during NVD. After birth the percent of neonatal complications after CS more than percent after NVD those showed first min. APGAR <7 was for Hypoglycemia, followed by fetal jaundice, fifth min. APGAR <7, fetal sepsis and fetal dying following cesarean surgery, but neonate complications with NV first min. APGAR <7, fetal jaundice, Followed by fifth min. APGAR <7, Hypoglycemia, and for neonatal sepsis

Recommendations

To enhance the result of births, local plans and policies should be developed and executed. Together with the maternal and neonatal complications that occur, this places a significant burden on babies, health care institutions, and associated families. To enhance the result of births, local plans and policies should be developed and executed.

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Ethical Clearance: The Research Ethical Committee at sciatic research by ethical approval of both MOH and MOHSER in Iraq

Conflict of Interest

None

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