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Maternal and Fetal Outcome in Emergency Caesarean Section after Failed Induced Labour

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Abstract:

Background: Failed induction of labour is one of the most important indications for cesarean section and it appears to have contributed to the current trends in caesarean rates. The aim of this study is to identify the pregnancy outcome in patients who had emergency caesarean section after failed induced labour. Materials and Methods: Retrospective descriptive case series study. It was conducted in Tripoli Medical Centre (TMC) Tripoli/Libya during the year 2011. Sixty-one pregnant women were randomly selected; all the cases underwent emergency caesarean section after failed induction. **Result:** A total of 61 patients were included in the study. The mean age of the patients was 30.4 ± 5.7 . The majority of the patients in this study were multigravidous (82%), multiparous (75.5%) and had no previous abortion (67.5%). The mean gestational age was 38.32 ± 2 weeks. With regards the causes of failure of induction and the prompt need for emergency cesarean section, the current study showed that the most frequent cause was fetal distress with a frequency of 39.5%, the second cause was failure in progress of labor 16.4% followed by obstructed labor with a frequency of 14.7% as well as meconium leaking with the same frequency 14.7%. The majority of the neonates had normal birth weight (75.6%). The males were 46% and the females were 54%. Babies who kept with their mothers were 32.7%, while babies who delivered admitted to the nursery were 67.3%. Conclusion: In conclusion, there are many maternal and fetal factors that associated with failed induction and the prompt need for emergency cesarean section which include; maternal age, multigravidity, multiparity, term pregnancy and nursery admission. The most frequent indications for emergency cesarean section after failed induction was due to fetal distress followed by failure of progress of labour then obstructed laour and meconium leaking.

Introduction:

The past few years have witnessed a global increase in caesarean section rates (1) Its rate varies internationally from 10 to 25 %. (2) The rate of cesarean section in Libya range between 10% and 15%. (3) Worldwide the malpractice pressure, as well as economic, organizational, social and cultural factors have all been implicated in this trend. (4) One of the most important factors that attributed to increase in the rates of cesarean section is obstetric interventions, such as induction of labour, which appears to have contributed to the current trends in caesarean rates. (1) The guiding principles for labor induction must be the obstetrician's judgment that the benefits to either the mother or the fetus outweigh those of continuing the pregnancy and that the induced labor must replicate spontaneous labor as closely as possible. Conditions such

Materials and Methods:

This was retrospective descriptive case series study. It was conducted in Tripoli Medical Centre (TMC) Tripoli/Libya during the year 2011. Sixty-one pregnant women were randomly selected, all the cases underwent emergency caesarean section after failed induction, and the patients have been induced by three different drugs misoprostol, Propess and oxytocin. All the cases were selected from the hospital files.

increase of the rates of cesarean section is multifactorial and not well understood. Changes in maternal characteristics and professional practice styles, increasing as post-date pregnancy, hypertensive disorders, intrauterine growth restriction and diabetes are commonly recognized indications for induction. However, there is evidence for an increase in the frequency of labour induction without any such agreed upon indication. This situation might lead to unnecessary caesarean deliveries and, consequently to a high risk of adverse outcomes for the mother and the child. (1,5,6) The aim of this study is to identify the pregnancy outcome in patients who had emergency caesarean section after failed induced labour

The following data was obtained from the files: the age, gravidity, parity, abortion history, indication of emergency CS, and neonatal outcome. Statistical analysis was computerized using the Statistical Program for Social Sciences (SPSS version 22) that used for data entry and analysis. Descriptive statistics were used and all results are presented as frequencies, means \pm standard deviation and percentages.

Result:

A total of 61 patients were included in the study. The mean age of the patients was 30.4 ± 5.7 (range from 18 years to 43 years). Most of the cases ranged between 26 and 35 years (65.7%). Cases less than 26 years and more than 35 years represented (18%) and at 37 – 40 weeks (75.4%) with a mean gestational age of 38.32 ± 2 weeks (Table 1). With regards the causes of failure of induction and the prompt need for emergency cesarean section, the current study showed that the most frequent cause was fetal distress with a frequency of 39.5%, the second cause was failure in progress of labor 16.4% followed by obstructed labor with a frequency of 14.7% as well as meconium leaking with the same frequency 14.7%, also cord prolapse was seen in 11.5% of cases, finally the fetal death and rupture uterus were found only one case in each indication (Table 2). In respect to neonatal outcome, the majority of the neonates had normal birth weight (75.6%). The males were 46% and the females were 54%. Babies who kept with their mothers were 32.7%, while babies who delivered admitted to the nursery were 67.3% (Table 3).

Discussion: The purpose of the current study was to identify the pregnancy outcome in patients who had emergency caesarean

(16.3%) of cases respectively. The majority of the patients in this study were multigravidous (82%), multiparous (75.5%) and had no previous abortion (67.5%). Most of the women in the current study delivered section after failed induced labour. The result of the study showed that the mean age for the patients was (30.4 ± 5.7 years) which was similar to many studies. (7,8) some of the studies reported that failed induction occurs in lower age which was between 20 and 24 years. (9,10) The majority of the women in the study were multigravida and multipara. Most of the studies reported that the highest percentage of patients who had induction of labour were primigravida and nulliparous. (8-11) The mean gestational age in this study was 38 week and most of the deliveries occur between 37 and 40 weeks. Similar result was reported by Tandu-Umba B et al study in which the mean gestational age was 37.95 weeks with most of the patients had term delivery. (11) Other studies reported that the mean gestational age for patients who had induction of labour was between 40 and 41 weeks and most of the patients had term delivery. (8-10) In this study the indications of emergency cesarean section after failed

labour were most commonly due to fetal distress followed by failure of progress of labour then obstructed labour and meconium leaking. Suja D study has reported similar result to the present study (12). Another study reported the leading indication for emergency caesarean section was cephalopelvic disproportion (39.3%), while antepartum hemorrhage and fetal distress

followed in that order (13) Regarding the neonatal outcome the result reported that male to female ratio was 1: 1.17, the majority of them had normal weight and admitted to the nursery. Studies showed lower rate of nursery admission in women who had emergency cesarean section after failed induction, which ranged between 14% to 40%. (8-13)

Table 1: Patient characteristics and demographic data

Patients profile	No (%)
Age of the patients	
18 – 25 y	11 (18%)
26 – 20 y	21 (34.4%)
31 – 35 y	19 (31.3%)
46 – 40 y	8 (13.1%)
> 40 y	2 (3.2%)
Mean ± SD	30.4 ± 5.7
Gravidity	
Primigravida	11 (18%)
Multigravida	50 (82%)
Parity	
Nulliparous	15 (24.5%)
Multiparous	46 (75.5%)
History of abortion	
Yes	41 (67.5%)
No	20 (32.5%)
Gestational age	
Term (37 – 40wks)	46 (75.4%)
Postdate	15 (24.6%)
Mean ± SD	38.32 ± 2 wks

Table 2: Indications of emergency cesarean section

Indications of emergency C/S	No. (%)
Fetal distress	24 (39.5%)
Failure in progress of labour	10 (16.4%)
Obstructed labor	9 (14.7%)
Meconium leaking	9 (14.7%)
Cord prolapse	7 (11.5%)
Fetal death	1 (1.6%)
Rupture uterus	1 (1.6%)

Table 3: Neonatal outcome

Neonatal outcome	No (%)
Gender	
Male	28 (46%)
Female	33 (54%)
Birth weight	
Very low birth weight (<1500g)	2 (3.2%)
Low birth weight (1500 - <2500g)	6 (9.7%)
Normal birth weight (2500 -4000g)	46 (75.6%)
Large baby (>4000g)	7 (11.5%)
Nursery admission	
Yes	41(67.3%)
No	20 (32.7%)

Conclusion:

In conclusion, there are many maternal and fetal factors that associated with failed induction and the prompt need for emergency cesarean section which include; maternal age, multigravidity, multiparity, term pregnancy and nursery admission. The most frequent indications for emergency cesarean section after failed induction was due to fetal distress followed by failure of progress of labour then obstructed laour and

meconium leaking. Clearly, more in-depth research is needed in order to identify the individual risk factors for emergency cesarean section after failed labour, perhaps with an interdisciplinary approach encompassing social science and medical fields to better identify the challenges facing both the patients and medical professionals in controlling this practice.

Reference:

- 1- Teixeira C, Correia S, Barros H. Risk of caesarean section after induced labour: do hospitals make a difference? *BMC Research Notes*. 2013;6:214.
- 2- Daniel S, Vishwanathan M, Simi BN, Nazeema A, : Study of maternal outcome of emergency and elective caesarean section in a semi rural tertiary hospital . *Nat J Med Res* 2014;1:14-18
- 3- Khawaja M, Choueiry N, Jurdi R. Hospital-based caesarean section in the Arab region: an overview. *Eastern Mediterranean health journal = La revue de sante de la Mediterraneeorientale = al-Majallah al-sihhiyah li-sharq al-mutawassit*. 2009;15(2):458-469.
- 4- Betrán AP, Ye J, Moller A-B, Zhang J, Gülmezoglu AM, Torloni MR. The Increasing Trend in Caesarean Section Rates: Global, Regional and National Estimates: 1990-2014. Zeeb H, ed. *PLoS ONE*. 2016;11(2):e0148343. doi:10.1371/journal.pone.0148343.
- 5- Mealing NM, Roberts CL, Ford JB, Simpson JM, Morris JM. Trends in induction of labour, 1998–2007: a population-based study. *Aust N Z J ObstetGynaecol*
- 6- Liu S, Liston RM, Joseph KS, Heaman M, Sauve R, Kramer MS. Maternal mortality and severe morbidity associated with low-risk planned cesarean delivery versus planned vaginal delivery at term. *CMAJ*. 2007;176:455–460.
7. Asghar S, Yasin S, Parveen S, Kauser N, Zafar F. Perinatal and Maternal Outcome Associated With Induction of Labour. *Obstetrics&Gynaecology*. 2014;5(1):1-6.
8. Rafique A, Sultana A. Maternal and Neonatal Outcome after Elective Induction at 41 Weeks of Pregnancy. *Journal of Islamabad Medical & Dental College*. 2012;(3):118-120.
9. Kumari T, Sunitha D, Sagari A.J K, Veena P. Study of Elective Induction of Labour in Multiparous Women and Maternal Outcome. *IOSR Journal of Dental and Medical Sciences*. 2015;14(12):63-68. 48
10. Patil R, Dave A. A study of maternal and perinatal outcome in induction of labour at 40 weeks and 41 weeks of gestation. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*. 2016;:2704-2708.

11. Tandu-Umba B, Tshibangu R, Muela A. Maternal and perinatal outcomes of induction of labor at term in the university clinics of Kinshasa, DR Congo. *Open Journal of Obstetrics and Gynecology*. 2013;(3):154-157.
12. Suja D, Manjusha V, Simi B, Nazeema A. Study of Maternal Outcome of Emergency and Elective Caesarean Section In A Semi-Rural Tertiary Hospital. *National Journal of Medical Research*. 2014;1(4); 14-18.
13. Nwobodo E, Isaah A, Panti A. Elective caesarean section in a tertiary hospital in Sokoto, north western Nigeria Nwobodo E I, Isah A Y, Panti A - *Niger Med J. Nigerian Medical Journal*. 2011; 52(4):263–5.