How to Cite:
Alwan, B. A., Nassar, N. F., & Sabti, S. A. B. (2022). Causes of primary cesarean section in Abo Ghraib general hospital. *International Journal of Health Sciences*, *6*(S1), 913-918. https://doi.org/10.53730/ijhs.v6nS1.4845

Causes of Primary Cesarean Section in Abo Ghraib General Hospital

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***Abstract*---**Aim of the study: To evaluate the causes of primary cesarean section in Abu Ghraib general hospital with the intention to reduce cesarean section rate. Patients and methods: A descriptive study done prospectively in Abo Ghraib general hospital in Baghdad, Iraq during the period from first of January till 30th of June 2021, there were 2799 of deliveries (beyond 28 weeks of gestation), 466 of them delivered by cesarean section. The study included all cesarean sections that collected from labor ward, general and private sector. Results: The most common primary Cs (57.4%) was found in age group between (21-30) years old, then (31.4%)) in age ?20 years, (9.9 %) in age between (31-40) years, and only (1.3%) in group of age >40 years. the most common indication was fetal distress in 65 (29.1%), then FTP in 57 (25.6%), then malpresentation in 27 (12.1%) and the least cause was preeclampsia and rupture uterus in 4 (1.8 %) for each cause. Conclusion: The most common causes of primary cesarean section in Abo Ghraib general hospital was fetal distress this may be due to low hospital resources.

***Keywords*---**Abu Gharib, cesarean section, general hospital, primary, fetal distress.

Introduction

Cesarean section is a surgical procedure by which delivery of fetus beyond 28 weeks gestation done through an abdominal incision, it is done when vaginal

International Journal of Health Sciences ISSN 2550-6978 E-ISSN 2550-696X © 2022.
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Manuscript submitted: 27 Nov 2021, Manuscript revised: 18 Feb 2022, Accepted for publication: 09 March 2022

delivery forms a risk to the mother or baby [1]. Although cesarean section may safely mother and/ or fetal life, it has higher fetal and maternal morbidity and mortality than vaginal deliveries in certain circumstances including respiratory distress syndrome, hypoglycemia, need for neonatal intensive care unit (NICU) admission [2], maternal anesthetic complications, blood loss, wound infection, risk for placental adhesion and uterine rupture in subsequent pregnancies [3].

Recently cesarean section reaches an epidemic proportion that require a histrionic review of obstetric management, in 2015 about 29.7 million cesarean sections were done globally and32% of deliveries were by cesarean section in United States [4]. Primary cesarean section is called when performed for the first time to the mother [5], it has been blamed to increase overall cesarean section rate in subsequent pregnancies, as attempt for vaginal deliveries after primary cesarean section has been decreased because it has a high risk for uterine rupture [6]. An American study announced that 50% of increasing cesarean section rate is the primary cesarean section [7], other study published showed that collective cesarean section after uterine scar committed to 45% of planned cesarean section and to 30.9% of all cesareans made in United Stated between 2002 and 2008 [8]. Attempts were made to reduce cesarean section rate, American Congress of Obstetricians and Gynecologists (ACOG) published recommendations by consensus to decrease primary cesarean section based on defiance practice [9], and convincing reduction in total cesarean rate was documented in hospitals where arbitrational strategy was administered [10].

Aim of the study

To evaluate the causes of primary cesarean section in Abo Ghraib general hospital with the intention to reduce cesarean section rate.

Patients and methods

This is a descriptive study done prospectively in Abu Ghraib general hospital in Baghdad, Iraq during the period from first of January till 30th of June 2021, there were 2799 of deliveries (beyond 28 weeks of gestation), 466 of them delivered by cesarean section. The study included all cesarean sections that collected from labour ward, general and private sector. The data including patients age, parity, gestational age, fetal presentation, progress of labor, mode of delivery, sector, indication and type of each cesarean section was obtained from patients' obstetric history, patients files, and daily morning report presentations. Failure to progress refers to prolonged labor when labor doesn't go as hastily as scheduled. Cephalopelvic disproportion (CPD) is termed when dimensions of the pelvis are incompetent to allow fetal head to pass the birth canal. Postdate refer to gestational age beyond 42 weeks of gestation. Fetal distress applied to non-reassuring fetal heart (persistent bradycardia or tachycardia, repeated late deceleration). Malpresentation include breech, transverse, brow and face presentation. Antepartum hemorrhage involves placenta previa and placental abruption. All other indications for cesareans were reported such as hypertension, preeclampsia, twin pregnancy, rupture uterus and others. Statistical analysis was carried out with the use of percentage.

Results

A total of 2799 pregnant ladies which entered to the labor room were included in the current study, 466 (16.6%) of them presented with Cs and the primary Cs was presented in 223 (47.9%). The mean age of Cs group was (25.84±5.9) years. Nullipara was the main group (58.7%), then (29.6%) in group of parity between (1-3), and (11.7%) in parity group (≥4), as shown in table 1.

Table 1
Frequency of Cs according to parity in the studied group

		No.	%
Parity	Nullipara	131	58.7
	1-3	66	29.6
	≥4	26	11.7
Total		223	100.0

As shown in figure 1, the most common primary Cs (57.4%) was found in age group between (21-30) years old, then (31.4%)) in age ≤20 years, (9.9 %) in age between (31-40) years, and only (1.3%) in group of age >40 years.

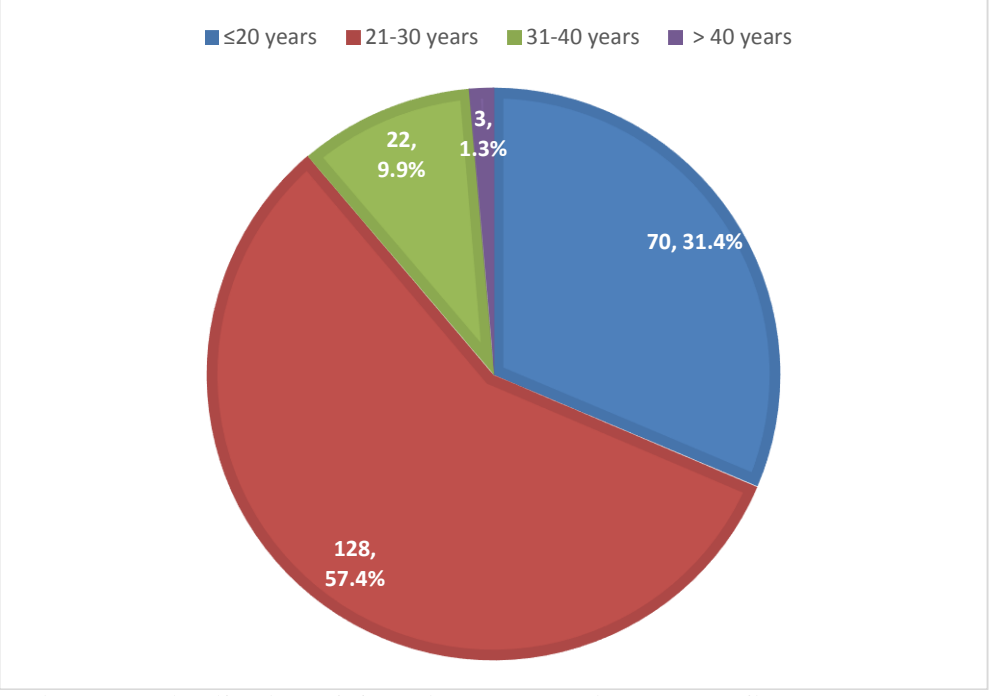

Figure 1. Distribution of the primary Cs patients according to age group

In table 2, the distribution of the indications for primary Cs (n=223) in the studied group shows that the most common indication was fetal distress in 65 (29.1%), then FTP in 57 (25.6%), then malpresentation in 27 (12.1%) and the least cause was preeclampsia and rupture uterus in 4 (1.8 %) for each cause.

Table 2
Causes for primary Cs in the studied group

Indication	No. (223)	%
Fetal distress	65	29.1
FTP	57	25.6
Mal presentation	27	12.1
CPD	24	10.8
Post date	13	5.8
APH	9	4.0
HTP	8	3.6
Twin	7	3.2
Maternal request	5	2.2
Preeclampsia	4	1.8
Rupture uterus	4	1.8
Total	223	100.0

Discussion

Caesarean section is the most common surgical procedure in obstetrics and it has been improved, simplified over time and it has become safer. In the current study we found that the prevalence of Cs was (16.6%), which is less than Shabila NP, study revealed that prevalence of cesarean section for all births in Iraq was 24.4% in 2012, and by the Iraq MICS 2011 showed a slightly lower cesarean section rate (22.2%) than that revealed by the present study [11]. This may be explained that rates of Cs were high in the governorates containing a larger number of private hospitals, and there was a significant positive relationship between the number of private hospitals and the cesarean section rate [12].

In the present study, the primary Cs was found in 223 (47.9%) from 466 patients with Cs. The primary cesarean rate is increased like to the total cesarean rate. In 1996, the U.S. primary cesarean rate was 14.5%, while in 2007 it was 23.4%—an increase of more than 60% [13]. The primary cesarean rate has become a major driver in the total cesarean rate. Barber et al found that 50% of the increase in cesarean deliveries at their institution was attributed to an increase in primary cesarean deliveries [14]. Understanding the factors leading to primary cesarean deliveries is essential to reducing the total cesarean rate. In a 2011 population-based study carried by Caughey A et al, mentioned that the most common indications for primary cesarean delivery included, in order of frequency, labor dystocia, abnormal or indeterminate (formerly, no reassuring) fetal heart rate tracing, fetal malpresentation, multiple gestation, and suspected fetal macrosomia [15].

In the present study the most common indications for primary cesarean section were fetal distress (29.1%), then FTP (25.6%), then malpresentation (12.1%) and the least cause was preeclampsia and rupture uterus in 4 (1.8 %) for each cause. Which is in agreement with Boyle A et al, study that found failure to progress (35.4%) was the most common indications for primary cesarean delivery, then nonreasoning FHR tracing (27.3%), and fetal malpresentation (18.5%) [16].

Kawakita T et al, in his study revealed that failure to progress or cephalopelvic disproportion and fetal macrosomia were the major indications for primary cesarean delivery that increased with increasing obesity class [17]. In a recent UAE study carried by Fahad A, the rate of primary cesarean section was 15.4% and the most common indication for primary cesarean section is failure to progress, non-reassuring FHR tracing, and fetal malpresentation [18].

Conclusion

The most common causes of primary cesarean section in Abo Ghraib general hospital was fetal distress this may be due to low hospital resources.

Recommendations

New and advanced instruments that's help to reduced fetal distress must be available like cardiotocography (CTG), Fetal blood sampling should be done.

No conflicts of interest
Source of funding: self
Ethical clearance: was taken from the scientific committee of the Iraqi Ministry of health

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