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Research Article

**REASONS OF INFERTILITY IN FEMALES APPEARED WITH  
CESAREAN SECTION**<sup>1</sup>Dr Hina Malik, <sup>2</sup>Dr Aanisa Majeed, <sup>3</sup>Dr Rimsha Alamdar<sup>1</sup>Islam Medical and Dental College Sialkot<sup>2</sup>THQ Hospital Lalian<sup>3</sup>Mayo Hospital Lahore**Abstract:**

**Objective:** Cesarean section and infertility are very vital medical entities in the field of gynecology. The relationship of infertility and cesarean surgery normally performed to reduce the high morbidity as well as mortality rate. The aim of study is to examine the reasons of the infertility in females appeared with cesarean section in the most recent pregnancy.

**Methodology:** This is a prospective research work based on observations, there were total 68 patients appeared from April 2016 to March 2019 but fifty-seven patients were fulfilling the standard of the research work. All these females delivered with the cesarean section in their most recent previous pregnancy.

**Results:** Average age of the patients was sixty-eight patients was 32.20 years with range of age from twenty-three to thirty-eight years. Median parity of the patients was two having range from one to six. The average duration of the infertility among patients was 2.40 years. Total 13.20% (n: 9) out of sixty-eight cesarean sections were the recurring surgeries. Total 70.60% (n: 48) out of sixty-eight cesarean sections carried out in emergency. Three main causing signs for the surgery were long duration of obstructive labor in 42.60% (n: 29) cases, eclampsia of severe nature in 16.20% (n: 11) cases and failed labor induction in 13.20% (n: 11). Etiology of infertility among fifty-seven patients that satisfied the standards are tubal occlusion in 66.70% (n: 3) patients, intra-uterine adhesion in 15.80% (n: 9) patients, concomitant tubal-occlusion and intra-uterine adhesion in 12.30% (n: 7) and hyperprolactinemia present in 5.30% (n: 3) patients.

**Conclusion:** In current research work, an important rate of the signs for cesarean sections and reasons behind infertility may have a relation with the perioperative sepsis of genital causing infertility. In time usage and convenience to the emergency services of the obstetric care can be very supportive to reduce the prevalence of infertility following these sections.

**KEY WORDS:** Cesarean, Surgery, Delivery, Perioperative, Hyperprolactinemia, Infertility, Labor, Eclampsia.

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**INTRODUCTION:**

The in time application of the cesarean section is very vital in critical situation to reduce the rate of morbidity and mortalities of females. Same kinds of research works are also available in the developed nations; the prevalence of the cesarean surgeries are increasing in our country Pakistan. Most frequent cited causes for the enhancement are pelvic disproportion, distress of fetal during labor, appearance of breech, adverse progress in labor, recurring caesarean surgery and non-functioning instruments or deficiency of the expertise to carry out the deliveries through vagina. But the research works have displayed that there is strong association between cesarean surgery and the high rate of morbidity and mortality of females in comparison with deliveries through vagina. Some morbidities can lead to infertility in future, increasing the high prevalent of this complication in country which is present with a range from 15.0% to 46.0% in our country.

The association between cesarean sections and infertility is very complicated and multi-dimensional. Infertility after the cesarean section can be voluntary or sometimes involuntary. Due to the high incidence of the complication of infertility in our population, it is necessary to assess the etiology to find the possible reasons to tackle the issue. So, this research work aimed to evaluate the reasons of infertility in the females that were present with the cesarean surgeries in their most last pregnancies.

**METHODOLOGY:**

In the complete duration of this research work, total 68 patients were present with the issue of the late pregnancy after the cesarean section in their most

current pregnancy. The duration of this study was from April 2016 to March 2019 in the gynecology department of the Allama Iqbal Memorial Teaching Hospital, Sialkot. All the participants of this research work underwent assessment for infertility which contains the information but past history, physical checkup and other investigations. Different included investigations are prolactin of serum, hysterosalpingography, and the evaluation for the uterus with the help of sonography and follicular tracking. The standard for the inclusion were the non-availability of the pregnancy or conception after cesarean section in last delivery with no past history about the disorder of infertility.

**RESULTS:**

There were total 68 patients as participants of this research work with an average age of 32.20 with a range from twenty-three to thirty-eight years. The median parity of the patients was two with a range from one to six. Total 13.20% (n: 9) patients were facing the repeated cesarean surgeries and 86.80% (n: 59) females had the cesarean section for the very first time. The average infertility duration was 2.40 years having the range from 1.50-4.50. The duration taken by the cesarean section showed 70.60% (n: 48) emergency and 29.40% (n: 20) elective cesarean surgeries. The signs for the cesarean sections are available in Table-1 as obstruction of labor for long duration in 42.60% (n: 29), eclampsia of severe nature in 16.20% (n: 11), failed labor induction 13.20% (n: 9), failed scar trial 10.30% (n: 7), distress of fetal in 5.90% (n: 4), macrosomia present in 4.40% (n: 3), past history of caesarean section in 2.90% (n: 2) and placenta Previa in 4.40% (n: 3) patients.

**Table-I: Indications for Index Caesarean Section (n=68)**

Indications	No	Percent
Prolong obstructed labour/ obstructed labour	29.0	42.60
Severe pre-eclampsia / eclampsia	11.0	16.20
Failed induction of labour	9.0	13.20
Failed trial of scar	7.0	10.30
Macrosomia	3.0	4.40
Fetal distress	4.0	5.90
Placenta praevia	3.0	4.40
2 previous caesarean section	2.0	2.90

Etiology of the infertility in fifty-seven patients who satisfied the standard of research work were tubal occlusion in 66.70% (n: 38) patients, intra-uterine adhesion in 15.80% (n: 9) patients, intra-uterine adhesion in addition with tubal occlusion in 12.30% (n: 7) and hyperprolactinemic anovulation available in 5.30% (n: 3) patients as presented in Table-2. Hysterosalpingo graphic evaluation and its detail with elaboration is present in Table-3.

**Table-II: Etiology of Infertility**

Etiology	No	Percent
Tubal occlusion	38.0	66.70
Intrauterine adhesion	9.0	15.80
Tubal occlusion and IUA	7.0	12.30
Hyperprolactinemia	3.0	5.30

**Table-III: Hysterosalpingo Graphic Pattern Of Tubal Occlusion**

Pattern of Tubal Occlusion	No	Percent
Solely Tubal Blockage (n=38)	Bilateral incomplete distal occlusion	29.0 76.30
	Bilateral complete distal occlusion	7.0 18.40
	Bilateral cornual occlusion	2.0 5.30
Concomitant IUA and Tubal Blockage (n=7)	Bilateral cornual occlusion	7.0 100.00

**DISCUSSION:**

Cesarean section is very important life-saving intervention that has association with the very low rate of mortality as well as morbidity when carried out in very standard condition. In this current research work, the duration of the caesarean surgery in emergency in long duration of the obstruction in labor are very frequent risk factors. These both factors of risk have association with the genital sepsis which is the most important factor behind the issue of infertility in our region. Research work have displayed that cesarean section in emergency has association with the high rate of complication as genital sepsis and its influence for long time. The rate of the sepsis after surgery is significantly higher when caesarean surgery carried out in the duration of labor or in the availability of the intra-uterine infection. Labor with obstruction is the main indication for the cesarean surgery in this current research work which is not much common in the developed countries. This factor is the main contributor for the morbidity of females which include the sepsis of wound, ruptured uterus and puerperal sepsis.

The infertility after the cesarean surgery was the attribution of many medical reasons. These reasons are from impact of the pelvic adhesions, disruption of the placental bed or other related infections. Different research works have stated that normal caesarean section has no association with the uterine or the tubal infertility. Research works have stated that relationship between abscess of pelvis making difficult the cesarean surgery and resulting infertility.

In current research work, only 5.30% patients were present with etiologic factor of hyperprolactinemia with no relation to pelvic pathology and perioperative sepsis of cesarean surgery. Main sources for the morbidity linked with the cesarean surgery associate to various complications of the sepsis, anesthesia and thromboembolic disorders. Infection after delivery is very frequent complication emerging from the cesarean delivery and the greatest prevalence happens in the indigent patient experiencing the cesarean surgery after prolonged labor and prolonged membrane's rupture.

Research works of our country stated 100% incidence of the puerperal sepsis among patients experienced obstructed labor, one other series noted endo-metritis after surgery about 30% of patients that were present with cesarean section. There is very strong need of the provision of the extensive care for maternal health in the countries which are under development which is achievable with the alleviation of the particular features that are the reason behind delay in the provision of the medical care in time and the surgical intervention in the countries which are under development. There division of these delays carried out in three different phases from phase 1-3. Phase-1 delays in the early decision to get the medical care, Phase-2 delays in the arrival of the female in the medical facility and Phase-3 delays are those occurs after the arrival of the pregnant female in the hospital facility.

**CONCLUSION:**

Factors accountable for infertility or delay in the pregnancy are poorness, impediments of culture to seeking orthodox care for health, adverse infrastructure and multifactorial postponement of therapy on the part of facilities of health care. The advancement in the maternal care and accessibility to the obstetric care in emergency situation can be helpful to reduce the infertility in females.

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