

Frequency of Anemia in patients with Wound Dehiscence Undergoing Caesarean Section through Pfannenstiel Incision

MEHVISH JAVERIA¹, URFA TAJ², ASIF HANIF³

ABSTRACT

Background: Cesarean birth is defined to be a delivery by an abdominal wall and uterus incision instead of delivery by vagina. In history, specially looking over recent 30 years the rate of cesarean births has increased considerably. Also there is a considerable risk of anemia in patients with cesarean delivery than in vaginal delivery.

Aim: To determine the frequency of anemia in patients with wound dehiscence-undergoing caesarean section through pfannenstiel incision.

Methods: This descriptive case series was done at famous Sir Ganga Ram Hospital in the Department of Obstetrics & Gynaecology Lahore. A total of 130 patients with pfannenstiel incision were included in this study. Study subjects were followed for 15 days. Investigations i.e. Hb level of the patients were sent to hospital laboratory.

Results: Mean age of the patients was 26.39±5.33 years. Out of 130 females, 37 patients (28.5%) were primigravida while 93 patients (71.5%) were multigravida (71.5%). Mean Hb level was noted 12.10±1.0g/dl with frequency of anemia as 18.5%.

Conclusion: Women who had wound dehiscence after Caesarean section had high frequency of anaemia. These women were more prone to infection due to the underlying anaemia (low Hb). It is strongly recommended to use certain prophylactic iron medications during pregnancy. For this purpose blood cells count must be in a certain limit during pregnancy and also a proper clinical therapy for anemia must be arranged.

Keywords: Caesarean section, Dehiscence of pfannenstiel incision, Anaemia

INTRODUCTION

Cesarean delivery or C-section is defined as delivery of a baby in a surgical procedure involving incisions of mother's abdominal and uterus walls. Caesarean section is a major obstetric operation carried out on a large-scale worldwide. The rate of C-section deliveries has considerably increased during the past few decades. The rate of Caesarean section as observed in 1970 was 5.8%. This rate has gradually increased up to a noteworthy level of 32.3% as observed in 2008 which has caused a lot of debates in the areas of maternity care.^{1, 2} The proportion of Cesarean births in various developed countries varies from 21.1%-2%. This proportion is directly proportional to a countries current developments and progress.³ Frequently, Cesarean segment is done through a low transverse suprapubic entry point known as Pfannenstiel cut.⁴ Anaemia is the most well known issue in the world, influencing more than two billion individuals. Recent information clearly

demonstrates that the prevalence of anaemia in pregnant ladies in industrialized nations is 17.4% while the incidence of anaemia in developing countries increments altogether up to 56%.⁵ Good balanced eating routine and oral iron supplementation is broadly utilized for the treatment of sickness, however not all patients respond sufficiently. Paleness has been recognized to be a vital hazard factor for abdominal wound dehiscence.⁶ Anemia is normally seen in females presenting in our clinics. In our populace, it is by all accounts consequence of poor nourishing conditions and especially Iron deficiency, gastrointestinal diseases, worm invasions and infestations, perpetual sicknesses etc. One research done in Israel reported that among the cases who created wound disease, 40.6% had anaemia,⁷ Another review in Nigeria reported that the rate of anaemia is just 17.1% among the females who developed twisted disease after Cesarean area with pfannenstiel incision.⁸ So a wide variation is found in literature. Basis of this study is to determine the recurrence of iron deficiency in our patients with dehiscence of pfannenstiel incision after Cesarean segment. Through this review, we needed to affirm frequency of anaemia in patients with wound dehiscence. From the recent research

¹Gynecologist, Punjab Social Security Health Management Company, Muzaffar Garh

²Assistant Prof. Khawaja Muhammad Safdar Medical College Sialkot

³Asst. Prof & Head of Department Bio-Statistics, Gulab Devi Post Graduate medical institute Lahore

Correspondence to Dr. Mehvish Javeria Email: dr.mehvishsyed@yahoo.com Cell: 0333-4176393

information, we have observed that there is array in results.^{8,7}. Therefore, this study will contribute significantly in concluding genuine frequency of our population as there is no local study is found to be published regarding this topic.

METHODOLOGY

This descriptive case series was conducted in the Department of Obstetrics and Gynaecology in Sir Ganga Ra Hospital Lahore. Study was carried out over a period of six months. A sample size of 130 cases in ganga ram hospital is calculated with a 95% of confidence level, margin of error being 6.5% and we take expected percentage of anemia as 17.1% with pfannensteil incision. Our sampling technique was non-probability purposive sampling

Inclusion Criteria: Our Patients with pfannenstiel incision aged 18-40 years with Dehiscence within 15 days after Caesarean section by clinical examination of wound were taken.

Exclusion Criteria: Patients with any surgical incision other than pfannenstiel incision, hepatitis A, B, C, E before caesarean section, females with diabetes, obesity, medical disorders like pregnancy induced hypertension, pre-eclampsia or eclampsia, renal insufficiency (serum creatinine >1.2mg/dl), diagnosed cardiac problem, tuberculous patients by history and clinical examination were excluded .

Data collection procedure: After taking approval from hospital ethical committee ,130 patients fulfilling inclusion and exclusion criteria were Caesarean section of Department of Obstetrics and gynaecology, Sir Ganga Ram Hospital, Lahore. Informed consent of the officials was gathered. Demographic information like patient's name, age, parity, address was recorded. Study subjects were followed for 15 days. Investigations i.e. the Hb level of the patients were sent to hospital laboratory. Wound dehiscence was diagnose as spontaneous re-opening or parting of wound after it has been closed surgically. Pfannenstiel incision was considered if there was 10-15 cm transverse skin incision into the abdominal wall below umbilicus and above pubic hairline for Caesarean section. Anaemia was defined as haemoglobin less than 11g/dl according to WHO. All this information was recorded on attached proforma by researcher herself. Data was analyzed by 16th version of SPSS . Mean of sample and standard deviation of data was obtained for certain variables like age of patients, gestational age, hemoglobin level etc. Data frequency and data percentage was calculated and compared with qualitative variables like anaemia. Frequency was calculated for parity.

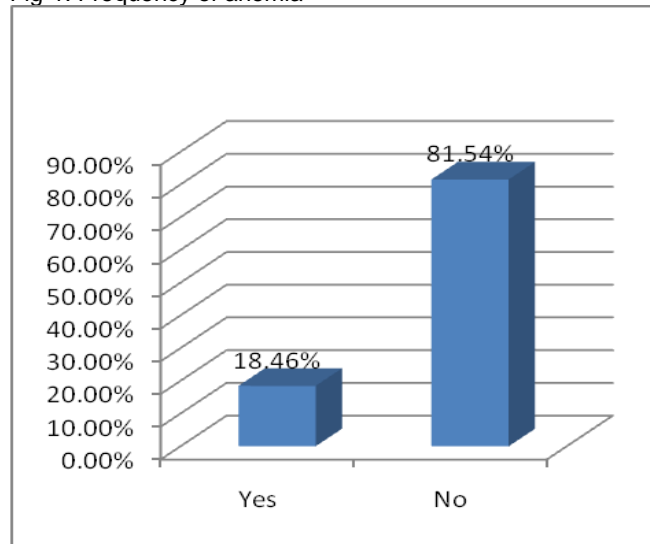
RESULTS

During our research study of six months a compile of 130 cases were thoroughly studied from 05-08-2013 to 04-02-2014. Most of patients included in our study were in range of 20-30 years old. Minimally some patients age was between 18-19 years old. Mean age of the patients were 26.39±5.33 years. Mean gestational age was 38.97±1.83. Out of 130 ladies, 37 patients (28.5%) were primigravida while 93 patients (71.5%) were multigravida (71.5%). Mean Hb level was noted 12.10±1.0 g/dl (Table-4). Anemia was observed in 24 patients (18.5%).

Table-1: Descriptive statistics of age, gestational age and Hb level

	Age	Gestational age	Hb levels
Mean±S.D	26.39±5.33	38.97±1.83	12.10±1.0

Fig-1: Frequency of anemia



DISCUSSION

Cesarean segment is a typical operation in obstetric practice. The frequency is rising worldwide and the detailed rate ranges from 5 to 25% contingent upon the nature and territory of practice^{9,10}. While the operation is generally grasped and used in the developed countries; reluctance, tragedies, misguided judgment, dread, blame and outrage encompass the C-section procedure for delivery of babies in Nigeria. Purposes behind these incorporates the morbidity and mortality from the operation, delayed hospital stay, and saw high cost of clinic bills^{11,12}. Prior studies directed by Ezechiet al in south western Nigeria, demonstrated that post Cesarean injury infection was not just a main source of delayed hospital stay yet a noteworthy reason for the across the board antagonism for Cesarean

deliveries in the region^{13,14}. Some researchers could show a relationship between maternal ages, anaemia, delayed labour, previous Cesarean section, various vaginal examination techniques and unbooked status and post Cesarean injury infection^{15,16}. Approximately 33% of pregnant women use iron medications during their pregnancy phase, still for every third pregnant lady anemia is present after delivery for vaginal as well as cesarean section¹⁷. The capacity of pregnant ladies to withstand blood loss at the delivery time relies on upon the hemoglobin level, the blood volume, the volume of blood lost, any associate coinciding diseases and intricacies¹⁸. Accurate estimation of blood lost at the time of Cesarean section delivery is essential in transfusion rehearse. It is hard to assess the blood loss precisely in this surgery in view of variation of blood lost and also because of possible mixing of blood with amniotic fluid. Studies done in the 60's utilizing different methods have specified the normal blood loss in the vicinity of 930 and 1106ml^{19,20}. It has been demonstrated that women endure post-haemorrhagic anaemia with haematocrit levels of 20% without severe complications on the off chance that they are stable and without therapeutic illness²¹. Transfusion might be suitable when range of Hb is 7-10g dl-1 and there is dynamic bleeding or cardiovascular dysfunction. Hemoglobin level in post cesarean cases in a woman relies on different components like measure of blood lost amid the surgery, iron storage in the body amid pregnancy of women, also lactation and body mass index (BMI) are included²². Any changes in vascular term of uterus may cause sudden hemorrhage. It was found by Faponle et al that the surgery term did not impact transfusion of blood.¹⁵ Research Studies demonstrated that in women breast feeding related with less risk of anemia after postpartum and high BMI before pregnancy increases risk of anaemia^{23,24}. In this study, iron deficiency was available in 18.5% of the patients with pfannenstiel entry point. Our findings are practically identical with the results of a study did in Nigeria showed that the rate of anaemia is just 17.1% among the women who developed wound contamination after Cesarean section with pfannenstiel incision⁸. There is likewise a shortage of data on recurrence of weakness in patients with wound dehiscence undergoing cesarean through pfannenstiel incision and the rates and severity of infection of anaemic pregnant women or iron-deficient anaemic pregnant women. Iron inadequacy was related with lower lymphocyte stimulation indexes²⁵ and iron supplementation enhanced lymphocyte stimulation²⁶ in extremely sickly pregnant women.

CONCLUSION

Women who had wound dehiscence after Cesarean section had high frequency of anaemia. These women were more prone to infection due to the underlying anaemia (low Hb). It is strongly recommended to use certain prophylactic iron medications during pregnancy. For this purpose blood cells count must be in a certain limit during pregnancy and also a proper clinical therapy for anemia must be arranged.

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