

EVALUATION OF GENERAL SURGERY CONSULTATIONS OF PREGNANT WOMEN FROM OBSTETRICS AND GYNAECOLOGY DEPARTMENT AT A TERTIARY CARE HOSPITAL

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Abstract

Background: Human pregnancy should be understood as a natural physiological state rather than a pathological condition. All surgical interventions carry inherent risks of complications, and obstetric and gynecological surgeries are no exception to this principle. Hence; the present study was conducted to evaluate general surgery consultations of pregnant women from obstetrics and gynaecology department. **Materials and Methods:** A total of 200 pregnant individuals were recruited for the study. Enrollment was limited to those who were referred for consultation to the general surgery department during their pregnancy. Out of the 200 individuals, 128 required either medical or surgical intervention, while the remaining 72 did not necessitate any further medical or surgical procedures and were managed through observation alone. Consequently, two distinct study groups were established: Group 1, which included those who underwent general surgical intervention, and Group 2, which comprised individuals who required no additional intervention. All data were recorded in a Microsoft Excel spreadsheet and subsequently analyzed using SPSS software, with univariate analysis performed to determine the level of statistical significance. **Results:** A total of 128 subjects belonged to group A while 72 subjects belonged to group B. Mean age of the subjects of group A and group B was 32.8 years and 30.4 years respectively. among subjects of group A, 30, 62 and 36 subjects were of first trimester, second trimester and third trimester respectively while among group B, 22, 25 and 25 subjects were of first trimester, second trimester and third trimester respectively. Significantly higher proportion of subjects of group A belonged to second trimester. **Conclusion:** The second trimester of pregnancy may heighten the likelihood of necessitating gastrointestinal surgery in pregnant individuals, as well as urinary incontinence. Additionally, elevated white blood cell counts should prompt physicians to consider the urgent need for general surgical intervention.

INTRODUCTION

Human pregnancy should be understood as a natural physiological state rather than a pathological condition. It induces significant physiological transformations that intensify as gestation advances. The initial hormonal alterations originate from the ovaries, subsequently transitioning to the placenta. The first hormone detected post-conception is human chorionic gonadotropin (hCG), followed by a cascade of hormones including estrogen, progesterone, prolactin, renin, and human placental lactogen.

Additionally, maintaining sufficient levels of circulating thyroid hormones is crucial for optimal reproductive health. These hormonal shifts coincide with the expansion of the uterus, which exerts a gradual mechanical influence.^{1,2} Furthermore, metabolic adaptations occur, characterized by increased insulin production. Pregnancy is marked by insulin resistance, primarily driven by human placental lactogen, which enhances the transfer of glucose across the placenta. Consequently, any intake of carbohydrates results in a more pronounced

elevation of plasma glucose levels than would typically be observed.³

All surgical interventions carry inherent risks of complications, and obstetric and gynecological surgeries are no exception to this principle. The outcome of such complications is significantly influenced by the speed of diagnosis and the timeliness of interventions conducted by general surgeons. Conditions within obstetrics and gynecology that necessitate general surgical intervention are occasionally observed. Swift diagnosis and effective management are crucial for ensuring a favorable prognosis. This is especially vital in scenarios where surgeons collaborate with obstetricians and gynecologists, as timely decision-making and management can be life-saving for patients. Common surgical complications following obstetric and gynecological procedures include incisional hernia, enterocutaneous fistula, intestinal obstruction, intra-abdominal abscess, and pelvic abscess.⁴⁻⁶ Hence; the present study was conducted to evaluate general surgery consultations of pregnant women from obstetrics and gynaecology department.

MATERIALS AND METHODS

A total of 200 pregnant individuals were recruited for the study. Enrollment was limited to those who were referred for consultation to the general surgery department during their pregnancy. Comprehensive demographic and clinical information were collected for all participants, along with a detailed history

pertaining to their gestational status. Out of the 200 individuals, 128 required either medical or surgical intervention, while the remaining 72 did not necessitate any further medical or surgical procedures and were managed through observation alone. Consequently, two distinct study groups were established: Group 1, which included those who underwent general surgical intervention, and Group 2, which comprised individuals who required no additional intervention. Various demographic, clinical, and gestational parameters were analyzed and compared between the groups. All data were recorded in a Microsoft Excel spreadsheet and subsequently analyzed using SPSS software, with univariate analysis performed to determine the level of statistical significance.

RESULTS

A total of 128 subjects belonged to group A while 72 subjects belonged to group B. Mean age of the subjects of group A and group B was 32.8 years and 30.4 years respectively. among subjects of group A, 30, 62 and 36 subjects were of first trimester, second trimester and third trimester respectively while among group B, 22, 25 and 25 subjects were of first trimester, second trimester and third trimester respectively. Significantly higher proportion of subjects of group A belonged to second trimester. Also mean WBC count was also significantly higher among subjects of group A.

Table 1: Division of subjects into study groups

Variable	Group A	Group B
	Intervention group	Non-intervention group
Number	128	72
Percentage	64	36

Table 2: Comparison of demographic and obstetric data

Variable	Group A	Group B	p-value
	Intervention group	Non-intervention group	
Mean age (years)	32.8	30.4	0.26
First trimester (n)	30	22	0.001 (Significant)
Second trimester (n)	62	25	
Third trimester (n)	36	25	

Table 3: Comparison of WBC count

WBC count	Group A	Group B
	Intervention group	Non-intervention group
Mean	15.35	11.75
SD	2.36	1.86
p-value	0.002 (Significant)	

DISCUSSION

Pregnancy induces considerable anatomical and physiological transformations in the expectant mother, aimed at supporting and accommodating the growing fetus. These alterations commence post-conception and influence all organ systems within the body. For the majority of women who have a straightforward pregnancy, these changes typically

revert to their pre-pregnancy state following delivery, leaving only minor residual effects.⁵⁻⁸

Between 0.2% and 2.0% of pregnant individuals undergo nonobstetric surgical procedures. The most frequently performed surgeries, in descending order of occurrence, include appendectomy, cholecystectomy, adnexal surgery (for conditions such as torsion or masses), trauma repair, surgery for small-bowel obstruction, and breast surgery. According to the American College of Surgeons

National Surgical Quality Improvement Program, the rate of postoperative complications during pregnancy is reported to be 5.8%. These complications encompass reoperations within 30 days (3.6%), infections (2%), issues related to wounds (1.4%), respiratory complications (2%), thromboembolic events (0.5%), the need for transfusions (0.2%), and mortality (0.25%).⁹⁻¹¹

Sel G et al conducted a study to identify factors that may elevate the risk of requiring general surgical interventions in pregnant individuals. A total of 74 pregnant patients were referred to general surgery for various medical concerns. Among these patients, 41 (55.4%) necessitated both medical and surgical interventions, while 33 (44.6%) were managed with conservative treatment. The patients were categorized into two distinct groups: those requiring general surgical intervention (GSI) and those for whom observation alone sufficed (non-GSI). The incidence of urgent interventions (UI) was observed in 22% of the GSI group, with 9 out of 41 patients requiring immediate care. Notably, 8 of these 9 patients (88.9%) were diagnosed with acute appendicitis, while the remaining patient presented with acute cholecystitis. Furthermore, the mean white blood cell (WBC) count was significantly higher in the GSI group compared to the non-GSI group. Additionally, it was noted that late-stage pregnancies were more frequently associated with the GSI group. This suggested that advanced gestational age may contribute to an increased likelihood of requiring GSI and urgent interventions. Elevated WBC counts should also serve as a warning sign for healthcare providers regarding the potential need for surgical intervention.⁹ Hence; the present study was conducted to evaluate general surgery consultations of pregnant women from obstetrics and gynaecology department. A total of 128 subjects belonged to group A while 72 subjects belonged to group B. Mean age of the subjects of group A and group B was 32.8 years and 30.4 years respectively. among subjects of group A, 30, 62 and 36 subjects were of first trimester, second trimester and third trimester respectively while among group B, 22, 25 and 25 subjects were of first trimester, second trimester and third trimester respectively. Significantly higher proportion of subjects of group A belonged to second trimester. Also mean WBC count was also significantly higher among subjects of group A. Ameh EA et al. conducted a study involving 217 obstetric and gynecologic procedures over a span of five years. These procedures constituted 23% of the total surgical operations performed at the hospital. The majority of these were emergency interventions, with caesarean sections representing 90% of the cases. Notably, 85% of the caesarean sections were carried out due to cephalopelvic disproportion. The complications observed were primarily septic in nature, particularly among patients who underwent caesarean sections due to obstructed labor. The overall mortality rate was recorded at 5.1%, while the neonatal mortality rate associated with caesarean

sections was 4.8%. The findings suggested that in the absence of specialized obstetricians and gynecologists, general surgical expertise is essential for addressing obstetric and gynecologic issues in rural settings. This expertise should be a key consideration when selecting medical personnel for rural healthcare facilities in developing nations.¹⁰ Wichendu N et al. conducted a study to assess the general surgical complications following obstetric and gynecological procedures at the University of Port Harcourt Teaching Hospital (UPTH). Data were collected from patient case notes, revealing a total of 92 surgical complications during the review period. The average age of patients was 33 ± 2 years, with an age range spanning from 20 to 48 years. The most common parity observed was 2. In terms of marital status, 60 (65.3%) of the participants were married, 26 (28.3%) were single, 4 (4.3%) were divorced, and 2 (2.1%) were widowed. The predominant obstetric and gynecological procedure was the emergency caesarean section, accounting for 24 cases (63%), while the most frequent surgical complication was incisional hernia, which occurred in 42 cases (76%). The mid-line incision was the preferred method for addressing these complications, utilized in 46 cases (67.4%). The majority of the surgeons involved in the repair of these complications were consultants, comprising 55 (60.9%) of the total. The study highlighted that emergency caesarean sections were the most prevalent surgical complications following obstetric and gynecological surgeries, with incisional hernia being the most common surgical issue encountered. Timely diagnosis and intervention by a collaborative team of general surgeons and obstetricians/gynecologists led to positive outcomes. The importance of collaboration between obstetricians, gynecologists, and other surgical specialties is crucial for improving prognosis in cases of intra-operative complications.¹¹

CONCLUSION

The second trimester of pregnancy may heighten the likelihood of necessitating gastrointestinal surgery in pregnant individuals, as well as urinary incontinence. Additionally, elevated white blood cell counts should prompt physicians to consider the urgent need for general surgical intervention.

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