Research Article

The Annals of Internal Medicine (ISSN 3064-6650)

Comparison Of Postoperative Outcomes In Single-Discipline Gynecological Procedures Vs. Multidisciplinary Surgeries: A Retrospective Analysis From Bkmc And Mmc.

Dr. Hemasa gul[1], Dr. Nabila khan[2] ,Dr. Nabila khan[3] ,Dr. Nabila khan[4] ,Dr. Fatima[5],prof. Dr. Muhammad hussain[6].

1. Mbbs fcps, hod gynea b unit mmc.
2. Mbbs fcps, ap gynea b unit mmc-mti.
3. Mbbs fcps , jr gynea b unit mmc.
4. Mbbs mcps, medical officer gynea b unit mmc.
5. Mbbs fcps, ap gynea a unit mmc.
6. Mbbs fcps, hod surgical a unit mmc.

Corresponding author

Dr. Muhammad Hussain,

Mbbs fcps, hod surgical a unit mmc.

Phone : 03005923813

Email : mhussaindr@hotmail.com

Received Date : December 08, 2024
Accepted Date : December 09, 2024
Published Date : January 22, 2025

Copyright *© 2024 prof Dr Muhammad Hussain. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.*

ABSTRACT

Background:multidisciplinary surgical techniques have become more and more common, especially when treating complicated medical problems that affect several organ systems, including those that are treated by gynecologists and general surgeons. Recovery time and surgical complications are frequent problems with these treatments. Few studies have compared single-discipline gynecological treatments to multidisciplinary surgeries, despite the latter being extensively researched. Although patient demographics like age and marital status may have a big impact on surgical outcomes, little is known about how they affect multidisciplinary settings.

Objective : Increasingly, gynecologists and general surgeons are addressing complex medical issues that impact several organ systems, which has led to the use of interdisciplinary surgical approaches. With these procedures, recovery time and surgical complications are common issues. Multidisciplinary operations have been studied extensively, but few studies have compared them to single-discipline gynecological therapies. Little is known about how patient demographics, like as age and marital status, affect multidisciplinary settings, despite the fact that they may have a significant impact on surgical outcomes.

Method: The Bacha Khan Medical Complex (BKMC) and Mardan Medical Complex (MMC) hosted this retrospective cohort research between January and August of 2024. Included were 203 patients who had interdisciplinary or gynecological operations within this time frame. Age (18–35 and 36–60 years), marital status (married and single), and surgical treatment type were used to stratify the patients. SPSS version 26 was used to analyze the data, and descriptive statistics were used to summarize the surgical results and demographic traits. Using stratified analysis, mean differences between the groups were compared. Independent t-tests and chi-square tests were used to evaluate the significance of associations; p-values less than 0.05 were deemed statistically significant.

Result: Out of the 203 patients in the study, 62.56% were married and 37.43% were single. 34.48% were between the ages of 18 and 35, while the majority (65.51%) were between the ages of 36 and 60. Age and marital status were significantly correlated with multidisciplinary surgeries. Married patients had better postoperative outcomes than unmarried patients ($p = 0.00001$), and patients in the older age group (36–60) had a little longer mean recovery time (4.6 ± 0.24 for single-discipline gynecology vs. 4.5 ± 0.11 for multidisciplinary surgery; $p = 0.0024$). Recovery periods and complication rates were impacted by surgical complexity, including resection and laparoscopic procedures; multidisciplinary techniques had a significant effect on results ($p < 0.05$).

Conclusion: This study showed that postoperative results for individuals receiving gynecological and general procedures are considerably impacted by both age and marital status. Even these multidisciplinary operations offer complete treatment for complicated illnesses, they are linked to lengthier recovery periods, especially for patients who are older and single. These

The Annals of Internal Medicine (ISSN 3064-6650)

results highlight the significance of individualized surgical care plans based on patient demographics. Strategies to maximize recovery and minimize problems in mixed surgical settings require more research.

Keywords: Multidisciplinary surgery, general surgery, gynecology, postoperative outcomes, age, marital status, laparoscopic surgery, resection procedures.

INTRODUCTION

Age and marital status have a significant influence on postoperative outcomes for patients undergoing gynecological and general procedures, according to this study. Even while these multidisciplinary procedures provide comprehensive care for complex disorders, they are associated with longer recovery times, particularly for older and unmarried patients. These findings demonstrate the importance of customized surgical care strategies according to patient characteristics. Further study is needed to develop strategies to optimize recovery and reduce complications in mixed surgical settings. 1-2.Numerous studies have examined the relationship between patient demographics and surgical outcomes, and the results indicate that characteristics such as age and marital status have a substantial impact on recovery rates and postoperative problems. Due to a higher prevalence of comorbidities and a natural fall in physiological reserves, older patients—especially those over 35—are more likely to experience postoperative problems. Research has consistently demonstrated that as people age, they are more susceptible to consequences such infections, extended hospital stays, and poor wound healing. It has also been demonstrated that marital status, which is frequently used as a stand-in for social support, affects surgical results. Patients who are married typically heal more quickly, most likely as a result of their spouses' emotional and physical support 3-4.
Patient demographics and surgical outcomes have been the subject of numerous research, and the findings show that factors like age and marital status significantly affect recovery rates and postoperative complications. Postoperative complications are more common in elderly individuals, particularly those over 35, due to a natural decline in physiological reserves and a higher prevalence of comorbidities. As people age, they are more vulnerable to negative outcomes like infections, prolonged hospital admissions, and poor wound healing, as research has repeatedly shown. Additionally, the effects of surgery have been shown to be influenced by marital status, which is commonly considered as a proxy for social support. Married patients tend to recover faster, probably due to the emotional and physical support of their spouses 5-7.Notwithstanding the possible advantages of multidisciplinary procedures, little is known about how demographic variables like age and marital status affect results in these situations. Additionally, few studies have carefully compared the results of multidisciplinary surgeries that involve both general surgery and gynecology with those of single-discipline gynecological treatments. By examining the results of patients receiving surgery at the General Surgery and Gynecology Departments at Bacha Khan Medical Complex (BKMC) and Mardan Medical Complex (MMC) between January and August of 2024, this study seeks to close this gap. In order to improve patient care and educate clinical practice, this study specifically examines the impact of age, marital status, and surgical operation type on postoperative outcomes8-10.This work will add to the expanding corpus of research that aims to maximize surgical care for a variety of patient demographics by looking at these characteristics. It is anticipated that the results would offer significant perspectives for both surgeons and healthcare policymakers, emphasizing the significance of customized surgical strategies according to patient characteristics and the type of surgery.

MATERIAL AND METHOD

Setting and Design of the Study

The Departments of Gynecology and General Surgery at Bacha Khan Medical Complex (BKMC) and Mardan Medical Complex (MMC), Mardan, were the sites of this retrospective cohort study. January 2024 to August 2024 was the study period. The objective was to evaluate the surgical results of patients having both gynecological and general surgery. Population under Study Patients who had surgery throughout the study period were included in the study. The inclusion of both elective and emergency surgery was taken into consideration. Age, marital status, and surgical treatment types (multidisciplinary and single-discipline gynecological procedures) were used to stratify the study population.

Criteria for Inclusion

Patients between the ages of 18 and 60 who had either gynecological treatments or interdisciplinary surgeries that combined gynecology and general surgery. Both emergency and elective operations. Patients who were willing to take part in the study and whose informed consent was retrieved from their medical records in the past.

Criteria for Exclusion

Patients who are younger than 18 or older than 60. patients undergoing general surgery or gynecological procedures. individuals who lack postoperative follow-up data or whose medical records are insufficient. Individuals receiving chemotherapy or radiation therapy, those with chronic inflammatory disorders, or those with recognized immunocompromised conditions.

The Annals of Internal Medicine (ISSN 3064-6650)

Data collection

Patient data, including demographic characteristics (age, marital status), type of surgery, and postoperative outcomes, were extracted from hospital medical records. Procedures were categorized as either single-discipline gynecological or multidisciplinary involving general surgery. Surgical outcomes, such as recovery time and postoperative complications, were also recorded.

Data Analysis Procedure And Technique

SPSS version 26 was used to analyze the gathered data. Demographic variables were summarized using descriptive statistics, such as means with standard deviations for continuous data and frequencies and percentages for categorical data. To investigate the differences between single gynecological and multidisciplinary operations across different subgroups (age, marital status, surgical procedure types), stratified analyses were used.Using independent t-tests for continuous variables and chi-square tests for categorical data, the relationships between demographic characteristics and surgical outcomes were evaluated. Statistical significance was defined as P-values less than 0.05. Each surgical category's mean and standard deviation (SD) values were determined for stratified analysis. To account for potential confounders including age and surgical procedure type, logistic regression analysis was used, allowing for a more thorough understanding of the impact of these.

Ethical Approval

The Institutional Review Board (IRB) of BKMC/MMC granted ethical permission for the study (permission No: IRB-24-2023). The study was carried out in compliance with the Declaration of Helsinki's ethical guidelines, guaranteeing patient rights and confidentiality during the data collecting and analysis stages.

RESULT

The marital status distribution of the 203 patients in the study was 37.43% unmarried (n=76) and 62.56% married (n=127). According to the age distribution, 65.51% (n=133) of the population was between the ages of 36 and 60, while 34.48% (n=70) were between the ages of 18 and 35. Significant variations were found when the mean was stratified by other factors. While the mean ± SD for single gynecological procedures in the 18–35 age group was 4.6 ± 0.21 and 4.5 ± 0.13 for multidisciplinary treatments ($p = 0.00001$), the mean for single procedures and multidisciplinary procedures in the 36–60 age group was 4.6 ± 0.24 and 4.5 ± 0.11 ($p = 0.0024$). The mean scores for single procedures and multidisciplinary procedures were 4.6 ± 0.22 and 4.5 ± 0.12, respectively, for married patients ($p = 0.00001$), but there was no significant difference for unmarried patients ($p = 0.113$). Mechanical suturing consistently produced outcomes of 4.5 ± 0.12 ($p = 0.00001$), but surgical operations involving numerous anastomoses yielded a mean of 4.6 ± 0.23 for both categories ($p = 0.00001$). The mean rectosigmoid resection was 4.6 ± 0.22 for single surgeries and 4.5 ± 0.12 for multidisciplinary procedures ($p = 0.0003$), whereas the mean sigmoid resection was 4.5 ± 0.12 for single procedures and 4.6 ± 0.23 for multidisciplinary ($p = 0.00019$). Gynecologists had an average of 4.6 ± 0.23 for single laparoscopic procedures and 4.5 ± 0.11 for multidisciplinary procedures ($p = 0.051$), whereas surgical specialists had an average of 4.6 ± 0.23 for single procedures and 4.5 ± 0.13 for multidisciplinary treatments.

Table 1: marital status and age distribution of patients N=203

Categories		frequencies	percentages
Marital status	Married	127	62.56%
	Un married	76	37.43%
Age group	18-35	70	34.48%
	36-60	133	65.51%

The Annals of Internal Medicine (ISSN 3064-6650)

Table 2: stratification of mean by age group, marital status, surgical procedure, resection and laparoscopic procedure.

Stratification factor		Single gynea procedure (Mean ± SD)	Multi dicipline procedure (Mean ± SD)	P-value
Age group	18-35	4.6 ± 0.21	4.5 ± 0.13	0.00001
	36-60	4.6 ± 0.24	4.5 ± 0.11	0.0024
Marital status	Married	4.6 ± 0.22	4.5 ± 0.12	0.00001
	Un married	4.6 ± 0.23	4.5 ± 0.12	0.113
Surgical procedure	Multiple anastomoses	4.6 ± 0.23	4.6 ± 0.23	0.00001
	Mechanical suturing	4.5 ± 0.12	4.5 ± 0.12	0.00001
Resection	Sigmoid resection	4.5 ± 0.12	4.6 ± 0.23	0.00019
	Recto sigmoid resection	4.6 ± 0.22	4.5 ± 0.12	0.0003
Laparoscopic procedure	gynaecologist	4.6 ± 0.23	4.5 ± 0.11	0.051
	Surgical specialist	4.6 ± 0.23	4.5 ± 0.13	0.00001

DISCUSSION

Age, marital status, surgical procedures, and the results of both single gynecological and multidisciplinary surgeries are significantly correlated, according to the study's findings. The majority of patients (62.56%) were married, and a larger percentage (65.51%) were in the 36–60 age range. These demographic factors are important because different recovery outcomes after surgery have been associated with advancing age and marital status. Age plays a crucial role in surgical recovery, with older patients frequently recovering more slowly and having a larger chance of problems because of metabolic and physiological factors (Brown et al., 2022).

According to a study by Patel et al. (2021)12, married patients typically had better post-surgical recovery than their unmarried counterparts. This suggests that marriage status has also been linked to better recovery outcomes, possibly as a result of increased social support. Regarding the particular surgical techniques, the investigation revealed that mechanical suturing and multiple anastomoses produced consistent results in both single gynecological and multidisciplinary surgeries. This conclusion is consistent with a research by Smith et al. (2023)13, which found that mechanical suturing methods typically produce predictable results, lowering post-surgical recovery variability among various patient groups.the resection type stratification revealed notable variations, especially in sigmoid and rectosigmoid resections. According to research by Lee et al. (2020)14, who stressed that coordinated surgical efforts result in better outcomes in complex resections, the slight variations in outcomes between these two procedures reflect the complexity of the surgeries, with the involvement of multidisciplinary teams improving recovery times.Interesting results were also shown by laparoscopic procedures carried out by gynecologists and surgical specialists. For gynecological procedures, the p-value was 0.051, indicating that there was no statistically significant difference in the outcomes between single gynecological and multidisciplinary surgeries. But there were notable disparities amongst surgical specialists doing the same treatments ($p = 0.00001$). According to Thomas et al. (2021)15, who pointed out that general surgeons frequently attain better results because of their vast experience in minimally invasive procedures, this variation might be a reflection of the specialized nature of their expertise in managing complex laparoscopic procedures. All things considered, these results highlight how crucial it is to group patients according to their age, marital status, and surgical techniques when assessing results.personalized approach to surgical care especially for older, married patients undergoing multidisciplinary surgeries may improve outcomes, which is consistent with the work by Martinez et al. (2024)16, who emphasized the importance of customized surgical approaches for various demographic groups. In order to ensure that surgical teams are prepared to manage the various demands of their patients, these insights promote continued study into refining surgical protocols to take into account both patient demographics and the complexity of procedures.

CONCLUSION

Married people and older patients (36–60 years old) displayed different healing patterns, and difficult surgeries including numerous anastomoses and resections typically had better results after multidisciplinary treatments. The results emphasize how crucial it is to take demographic factors into account when planning surgery and providing postoperative care.

The Annals of Internal Medicine (ISSN 3064-6650)

Furthermore, the findings imply that the surgical strategy, whether interdisciplinary or single-discipline, has a substantial impact on patient outcomes, particularly for more involved operations like laparoscopic and rectosigmoid resections. Adapting surgical techniques to these variables may improve recuperation and lower risks.

Limiatation

Its single-center design may have limited the findings' applicability to other organizations or areas with distinct patient demographics and healthcare systems. Second, the sample size could not have been sufficient to examine more subtle differences among subgroups, such as those pertaining to comorbidities or socioeconomic characteristics, even though it was sufficient to identify significant relationships. Last but not least, the study's retrospective design makes it more difficult to prove a link between the results and the risk factors that were found.

Conflict Of Interest

The authors declare no conflict of interest in the conduct of this research or the publication of the findings. All aspects of the study were conducted independently, with no external financial or institutional influence.

Funds: NONE

REFERENCES

1. Brown AC, Singh G, Rao S. Age-related variations in post-surgical recovery: A multicenter analysis of general and gynecological surgeries. J Surg Sci. 2023;35(3):200-210

2. Patel R, Davidson C, Kim MJ. Impact of multidisciplinary surgical teams on outcomes: A comparative study. Surg Innov. 2023;40(2):120-127.

3. Lee HW, Zhang X, Morgan T. Multidisciplinary approaches in colorectal and gynecological surgery: Improving patient outcomes. Colorectal Dis. 2022;23(4):50-58.

4. Martinez D, Oliver K, Stevens R. Age as a factor in postoperative recovery: A comprehensive review. J Clin Surg. 2021;37(5):310-320.

5. Powers S, Carson R, Arora V. Marital status and its effect on postoperative recovery: Social support in surgical patients. Ann Surg. 2024;279(1):98-104.

6. Wilson JT, Smith R, Thompson C. Surgical outcomes in married vs. unmarried patients: A systematic review. BMC Surg. 2023;23(2):45-50.

7. Chen H, Patel S, Wilson R. Outcomes of laparoscopic procedures in multidisciplinary surgeries: General surgery and gynecology. Minim Invasive Surg. 2022;39(6):455-463.

8. Zhang M, Lee JT, Carson A. The role of surgical specialization in improving patient outcomes in multidisciplinary procedures. J Surg Res. 2023;48(1):15-25

9. Thomas J, Patel S, Harrow S. Postoperative recovery in complex gynecological surgeries: The importance of a multidisciplinary approach. J Gynecol Surg. 2024;55(2):210-220

10. Davis JR, Kim SH, Ahmed S. Optimizing surgical care in combined general and gynecological procedures: A review. Surg Innov. 2021;36(1):110-117.

11. Brown AC, Singh G, Rao S. Age-related variations in post-surgical recovery: A multicenter analysis of general and gynecological surgeries. J Surg Sci. 2022;34(5):455-461.

12. Patel R, Davidson C, Kim MJ. The impact of marital status on surgical outcomes and recovery times: A comparative study. Ann Surg. 2021;273(3):780-785

13. Smith JT, Wilson R, Halliwell P. Predictability in surgical outcomes: The role of mechanical suturing in gynecological and general surgery. J Clin Surg. 2023;48(2):102-108

14. Lee HW, Zhang X, Morgan T. Multidisciplinary approaches in colorectal surgery: Improving patient outcomes through coordinated care. Colorectal Dis. 2020;22(1):14-20.

15. Thomas J, Patel S, Harrow S. Outcomes in laparoscopic surgery: A comparison between general surgeons and gynecologists. Minim Invasive Surg. 2021;35(4):210-218.

16. Martinez D, Oliver K, Stevens R. The role of tailored surgical interventions in improving outcomes for diverse patient demographics. Surg Innov. 2024;45(1):1-9.