A Review Article Titled Improve Survival With Appropriate Timing Of Diagnostic Ct-Scan In Colorectal Patients With Anastomotic Leakage

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DOI: 10.47750/pnr.2022.13.S08.533

OVERVIEW

Anastomotic leakage (AL), a dreaded side effect of colorectal surgery, is linked to higher morbidity and mortality rates. Although surgical technology has advanced, the reported risk of 1-22% is still considerable. AL causes a permanent enterostomy, additional surgery, and extended hospitalization. Additionally, it results in a worse 5-year survival rate and increased mortality (10–16%) in the early postoperative term. The pathophysiology of AL is still unknown despite considerable research examining the connection between patient risk factors, AL, and various surgical approaches. The prognosis of AL is significantly influenced by early diagnosis, ideally before symptoms appear. Although the C-reactive protein (CRP) level has been studied as a PR symptomatic marker, its prognostic significance is still debatable. Patients with AL frequently experience fever, ileus, and discomfort, although these clinical indicators of a systemic inflammatory response are not highly specific.[1]

Although relatively little is known about the best way to treat AL, delaying the management of peritonitis increases the risk of worsening inflammatory response. In research involving 137 surgeons, the location and presentation of the leak and the patient's general physical state were the most crucial factors in determining the best course of action for treating colorectal AL, whether to perform an enterostomy or a new anastomosis. This study aimed to learn more about the factors that affect mortality in our patient population when it comes to the diagnosis and treatment of AL. This could lead to better treatment plans.[2]

This study demonstrates that a higher death rate is related to a greater age and a longer interval between the diagnostic CT and AL surgery. As a result, it is crucial that surgery to treat AL be carried out as soon as possible after AL diagnosis, particularly in elderly individuals. The type of AL treatment did not affect death, and the mortality rate was consistent with another research.This study aims to be the first to shed light on mortality risk and age after AL. Our investigation showed a significant difference in age between the survivors and non-survivors (p=0.001). We discovered through probit analysis that the mortality risk rose with age, with an 80-year-old patient's mortality risk being five times more than that of a 60-year-old patient. Even after age was taken into account, there was still a relationship between the delay in corrective surgery and death risk.[3]

The impact of extended exposure to bacterial peritonitis is likely to be the cause of the connection between time to remedial surgery and mortality. Barnett et al. indicated that inflammation hurt mortality in mice with bacterial peritonitis. Even though the bacterial count was the same between the mice that died and the animals that survived, it is interesting to note that the inflammatory response was altered [10]. On the day of corrective surgery, we discovered that the non-survivors had a higher CRP level (p=0.06), which is consistent with the literature and may indicate those above altered inflammatory response.[4]

In contrast to earlier research, ours could not demonstrate a link between mortality and comorbidity (ASA score >3). Many patients with low ASA scores most likely caused this. This study's second objective was to assess the various AL correction methods. The majority of surgeons (79%) decided to make an enterostomy.[5]

We did not discover a link between the AL treatment option and death. However, the type of initial surgery and the original disease did not affect death. Due to its retrospective character, this study was not intended to show any variations in mortality for various AL care strategies. Few studies have discussed the various AL management strategies employed, although the preference for enterostomy is consistent with another study. According to Fraccalviere et al., generating a loop stoma and preserving the anastomosis was associated with lower mortality and morbidity rates and a higher rate of stoma reversal than rupturing the initial anastomosis and making a stoma.[6]
Although each patient's course of treatment was decided by experienced surgeons, one of the issues we discovered was the absence of a strategy for handling a patient with (suspected) AL. We hypothesize that the delay we saw is due to a lack of standardization, which raises the mortality risk. Our hospital's sole treatment regimen for patients involved post-operative hospitalization to the ICU and five days of intravenous Cefuroxime and Metronidazole. The choices regarding surgical treatment are not uniform. Therefore, predicting which post-operative actions will have a significant impact is challenging. For instance, standardizing the surveillance following surgery, as demonstrated by den Dulk et al., results in a shorter diagnosis delay and a better outcome after AL. We advise that a method be created to highlight the urgency of surgery for particular patients since we demonstrate the impact of a delay in the surgery time. Depending on their clinical condition, patients under 70 should have surgery within two hours of receiving an AL diagnosis, while those under 70 should have surgery within five.[7]

Additionally, one could think about forgoing the CT scan, particularly in individuals with strong clinical suspicion of AL. Doing so will reduce treatment delays, and survival rates will increase. The main issue with this method is the increased likelihood of a lousy laparotomy and how it would affect the patient's already precarious health. More research must be conducted to understand this strategy's advantages and dangers better.[8]

The study's findings indicate no differences in mortality across various AL therapies. It does demonstrate that higher fatality rates are linked to older age and longer times between diagnostic CT and AL curative surgery. These findings highlight the significance of prompt treatment when patients are identified as having AL or are clinically suspected of having AL, particularly in the case of elderly patients. We demonstrated how postponing surgery in older individuals causes death to rise exponentially. Depending on the patient's age, CRP level, and comorbidities, this could aid in creating a treatment logarithm for standardizing the therapy of AL from the point of diagnosis through the type of surgery. We emphasize the significance of standardizing treatment from suspicion until the actual intervention because AL is a severe consequence. Future research should be done in the future to understand the implications of standardization.

FUNDING: There was no outside support for this study.

CONFLICTS OF INTEREST: The authors declare no conflicts of interest.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This evaluation does not require ethical approval because no patient data will be collected. Plagiarism, confidentiality, malfeasance, data falsification and/or falsification, double publishing and/or submission, and duplication are among the ethical problems examined in this study.

ACKNOWLEDGMENTS

First and foremost, I want to express my gratitude to God for allowing me the opportunity to conduct and complete this research project for my academic achievement. I'd want to thank and show gratitude to my mentor for encouraging and guiding me during the process of writing this post. who had devoted their valuable time to guide me, either directly or indirectly, during the journey I'd want to express my heartfelt gratitude to all of my friends for their unwavering support and aid in completing this study. Finally, I'd like to express my gratitude to my family for their love, patience, and support throughout the study process.

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