STUDENTS' CORNER
LETTER TO THE EDITOR

Minimally invasive laparoscopic surgery or open surgery for Colon Resection: A long-standing dilemma

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Dear Madam, Colon resection (colectomy) is the surgical removal of diseased sections of the colon due to their underlying etiology, which may be in the form of colon cancer, precancerous or inherited conditions among many other issues. It has a 2% to 6% mortality rate with several contributing factors, including the type of operative procedure employed.[1] Open surgery, minimally invasive laparoscopic surgery (MIS), and robotic surgery are the procedures in practice for colectomy. This letter assesses the clinical and cost-related outcomes of MIS and open surgery for colon resection, addressing the debate about their efficacy and safety.

In this regard, Cone et al. compared the two colectomy techniques with a sample population of 1314696 patients and concluded that the laparoscopic colectomy attenuates the risk of mortality with an odds ratio of 0.51 and a reduction in mortality from 3.9% to 0.9% in the laparoscopic group.[1] Laparoscopic procedures are also believed to minimize the cytokine response and avoid a period of relative immunosuppression that is normal in open surgery.[1] When treating stage III colon adenocarcinoma, Lee L et al. found MIS positively correlated with reduced delays in starting adjuvant systemic therapy.[2] Furthermore, results from Hakim et al's. recent study substantiated that open surgery had a longer length of stay, and higher readmission and mortality rates with a 13 times higher probability of mortality at discharge compared to MIS resection.[3]

MIS has already demonstrated superiority over open surgery for colectomy in terms of mortality, median LOS, 30-day readmission rate, and procedure cost. Considering these potential advantages, open surgery should no longer be regarded as gold standard for colectomy. On the other hand, several studies also concluded that there is no significant difference in early mortality between open and laparoscopic groups. However, these database studies were limited by patient selection and whether the study was single or multi-institutional. In conclusion, the use of minimally invasive surgeries should be prioritized to provide excellent care to the patient. Public hospitals must also consider these techniques of surgery as they are less time-consuming, given the long waiting list at government facilities. Additionally, it should be noted that MIS requires a shorter stay at the hospital and less monitoring from the physician, hence it can also be used to alleviate the problem of inadequate doctor-patient ratio, which is currently at 1:1300 in Pakistan, much lower than that recommended by WHO.

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