

The Impact of the COVID-19 Pandemic on Length of Stay in Elective Ventral Hernia Repair

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Introduction: Hospital systems nationwide have undergone many changes as a result of the COVID-19 pandemic that have impacts on all surgical care. The goal of this study was to evaluate differences in length of stay (LOS) for patients undergoing elective ventral hernia repair (VHR) before and during the COVID-19 pandemic.

Methods: A retrospective analysis was conducted of patients who underwent elective VHR between 2015 and 2021. Admissions during the COVID-19 pandemic were defined as those after March 1, 2019. Comorbidities, complications and age were assessed and the ability to have visitors was also evaluated due to changing policies during the pandemic. Variables were evaluated for association with LOS by Chi-square or Student's t test as appropriate. Variables with $p < 0.05$ after univariate analysis were considered for inclusion in multivariate logistic regression modeling.

Results: A total of 549 patients were included in the study with 93 patients defined as during the COVID-19 pandemic. A significant difference in LOS was found between white and non-white patients ($p < 0.001$). Patients who developed a postoperative complication had significantly increased LOS by multivariate analysis ($p < 0.001$). No significant difference in LOS was found between patients before and during the COVID-19 pandemic. There were 29 patients that were unable to have visitors during the COVID-19 pandemic due to hospital policy and they were found to have a significantly longer LOS ($p = 0.007$). As expected, patients that were older or had comorbidities were independently associated with increased LOS ($p < 0.001$ and $p = 0.006$, respectively).

Conclusions: It was hypothesized that patients who underwent ventral hernia repair during the COVID-19 pandemic would have decreased LOS, however no significant difference was found. Interestingly, patients that were not allowed visitors during the pandemic had significantly longer LOS. Further studies to investigate inpatient visitation and LOS would be of interest to elucidate the reason for this difference.

One Line: Prohibiting visitors during the COVID pandemic led to increased LOS in patients who underwent ventral hernia repair.

	β	Standard Error	95% CI	<i>p</i> value
Post COVID	-0.00573	0.22801	-0.454 – 0.442	0.9799
Any Complication	-2.93926	0.20065	-3.333 – -2.545	<0.001
Any Comorbidity	-0.54423	0.19686	-0.931 – -0.158	0.006
Age	0.02206	0.00542	0.011 – 0.033	<0.001
Visitors allowed	1.02785	0.38147	0.279 – 1.777	0.007

