CovidSurg – Cancer: An International Cohort Study Assessing Cancer Surgery Safety During the SARS-CoV2 Pandemic

Outcomes from elective colorectal cancer surgery during the SARS-CoV-2 pandemic

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BACKGROUND

COVID-19 Pandemic
- Decreased hospital capacity
- Unclear risk of perioperative infection
- Hospitals triage some cancer cases
- Some Guidelines changed recommendations for anastomosis to decrease severity of complications, ICU needs, and length of stay

CovidSurg Collaborative
- International collaboration of hospitals providing real-time data to evaluate change in practice and outcomes during pandemic
- 1667 hospitals
- 122 countries

METHODS

Study Design
International cohort study of patients undergoing elective resection of colon or rectal cancer without perioperative suspicion of SARS-CoV2

Study Period
Data from first recorded case of COVID-19 through April 19th, 2020

Primary Outcome
- 30-day mortality

Secondary Outcome
- Anastomotic leak
- Postoperative SARS-CoV2
- Comparison to pre-pandemic data

RESULTS

<table>
<tr><td rowspan="6">All Patients
n=2,073
Alive n=2,035 (98.2%)
Died n=36 (1.8%)</td><td rowspan="2">End Stoma
n=335 (16.2%)
Died n=5 (1.5%)</td><td>SARS-CoV2 +
n=14 (4.2%)
Died n=2 (14.3%)</td><td></td></tr>
<tr><td>No Infection
n=321 (95.8%)
Died n=3 (0.9%)</td><td></td></tr>
<tr><td rowspan="4">Anastomosis
n=1738 (83.8)
Died n=33
(1.9%)</td><td rowspan="2">SARS-CoV2 +
n=64 (3.7%)
Died n=13 (20.3%)</td><td>Anastomotic Leak
n=13 (20.3%)
Died n=5 (38.5%)</td></tr>
<tr><td>No Anastomotic Leak
n=51 (79.7%)
Died n=8 (15.7%)</td></tr>
<tr><td rowspan="2">No Infection
n=1674 (96.3%)
Died n=20 (1.2%)</td><td>Anastomotic Leak
n=73 (4.4%)
Died n=5 (38.5%)</td></tr>
<tr><td>No Anastomotic Leak
n=1601 (95.6%)
Died n=14 (0.9%%)</td></tr>
</table>

Change in Practice	Stoma rate pre-Covid = 27.2% Stoma rate Covid = 34.2%
	End Stoma pre-Covid = 43.6% End stoma Covid = 70.0%
Reasons for Change	Recommendation from specialty association (44%)
	Avoid complications that would require ICU (39%)
	Reduce length of stay (10%)
	Lack of access to critical care (2%)
Change in Outcomes	Postop SARS-CoV2 Infection = 3.8%
	Mortality pre-Covid = 1.1% Mortality Covid = 1.8%
	Anastomotic leak pre-Covid = 7.7% Anastomotic leak Covid = 4.9%

- Significant predictors of 30-day mortality
  - SARS-CoV2 infection
  - anastomotic leak
  - male sex
  - >70 yrs old
  - cancer stage IV
  - total/subtotal panproctocolectomy
- Anastomotic leak less likely but more fatal during the pandemic (8.6% vs 6.6%)
- Patients selected for surgery were fitter

LIMITATIONS

- Very early in the pandemic
- Absolute change in practice small
- No data on patients who had surgery delayed due to COVID-19

CONCLUSIONS

- Change in practice did not reduce overall complication rates seen in this study
- Surgeons need to further mitigate against both SARS-CoV-2 and anastomotic leak when offering surgery during current and future COVID-19 waves
- Fitter patients will benefit most from curative surgery during pandemic peaks
- Estimated at least 3 million cancer operations delayed worldwide, need to efficiently identify best pandemic surgical candidates[3]

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1. COVIDSurg Collaborative. Outcomes from elective colorectal cancer surgery during the SARS-CoV-2 pandemic. Colorectal Dis. 2020 Nov 15:10.1111/codi.15431. doi: 10.1111/codi.15431. Epub ahead of print. PMID: 33191669; PMCID: PMC7753519.
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