Does Protracted Surgical Inactivity Affect Surgical Skills?

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BACKGROUND

→ Elective surgeries were suspended in New York City between March 16 and June 9, 2020.

→ While necessary to divert resources to the pandemic, this interruption was unprecedented.

→ We hypothesize that the three-month limited case volume may have caused a decline in surgical skill, as assessed by operative time and crowd-sourced skill assessment.

METHODS

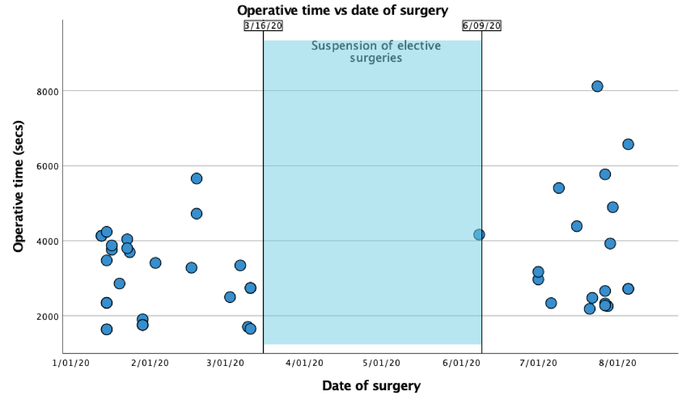
→ Patients undergoing robotic sleeve gastrectomy between January 1 and March 16 (pre-suspension) and June 9 and August 31 (post-suspension) at a single health care system were captured in a prospective database.

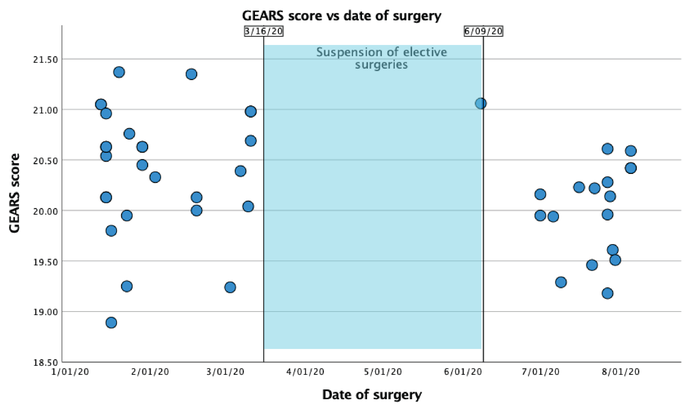
→ GEARS scores were assigned through crowd-sourced layperson evaluators by a third party.

→ A paired t-test was used to compare the mean operative time and GEARS score for each surgeon before and after the suspension. Two-tailed p-value < 0.05 was considered significant.

RESULTS

→ Four surgeons and 39 patients were included for review.





	Pre-suspension	Post-suspension	P-value
Operative time (mins)	54 ± 18	69 ± 24	0.48
Total GEARS score (mean)	20.3 ± 0.7	20.0 ± 0.5	< 0.001
Bimanual dexterity (mean)	4.1 ± 0.2	3.9 ± 0.1	< 0.001
Robotic control (mean)	4.2 ± 0.2	4.2 ± 0.1	0.44
Force sensitivity (mean)	4.2 ± 0.2	4.1 ± 0.2	0.82
Efficiency (mean)	3.7 ± 0.1	3.7 ± 0.2	0.83
Depth perception (mean)	4.1 ± 0.2	4.0 ± 0.2	0.99

CONCLUSIONS

→ Mean operative time was not affected by the three-month suspension.

→ GEARS scores were significantly decreased, mainly driven by decreased bimanual dexterity.

RECOMMENDATIONS

→ During periods of absense in the operating room, surgeons should attempt to engage in simulation to maintain robotic skills.

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