

BACKGROUND

- Appendicitis is the most common pediatric abdominal surgical emergency
- With the rise of the Coronavirus Pandemic, quarantine measures have been enforced to limit the dissemination.
- The purpose of this study was to identify any differences in the clinical presentation and outcomes of pediatric acute appendicitis during the Coronavirus Pandemic.

METHODS

- A single institution retrospective assessment of all pediatric patients (<18 years old) with acute appendicitis from December 2019 to June 2020
- Two Groups: the Pre-COVID group (before 03-15-2020) ; the COVID group (after 3-15-2020)

RESULTS

Table 1: Demographic and Pre-Operative Characteristics

	Pre-COVID (n=28)	COVID (n=17)	p-value
Age (years, IQR)	13 [9-16]	13 [11-16]	0.63
Male Gender (yes, %)	21 (75)	14 (82)	0.71
Primary Language – English (yes, %)	26 (93)	15 (88)	0.62
Race – White (yes, %)	17 (61)	13 (76)	0.67
Time from SO to ED (hours, IQR)	24 [12-24]	36 [24-72]	<0.05*
Time from ED to OR (hours, IQR)	7 [3-14]	11 [7-14]	0.38
Use of Ultrasound (yes, %)	18 (64)	12 (71)	0.75
Use of CT (yes, %)	12 (43)	8 (47)	1.00
PAS (score, IQR)	6 [5-7]	8 [7.5-9]	0.003
WBC Count (cells x 10 ⁹ , IQR)	13.4 [9.7-15]	16.6 [12.1-18.9]	0.07
Perforation (yes, %)	7 (25)	7 (41)	0.10

SO = Symptom Onset. ED = Emergency Department. OR = Operating Room. PAS = Pediatric Appendicitis Score. WBC = White Blood Cell.
*Statistically significant

- 45 patients were included
- Median age of 13 years [IQR 9.9 - 16.2]
- 35 males (78%)
- 28 patients in the Pre-COVID group (62%) and 17 in the COVID group (38%).

Table 2: Clinical Outcomes by COVID Testing

	Tested (n=10)	Not Tested (n=35)	p-value
Age (years, IQR)	13 [10-13]	14 [10-16]	0.35
Male Gender (yes, %)	9 (90)	26 (74)	0.41
Time from ED to OR (hours, IQR)	6 [1-10]	4 [1-10]	0.74

IQR = Interquartile range. ED = Emergency Department. OR = Operating Room.

Table 3: Clinical Outcomes by COVID Era

	Pre-COVID (n=28)	COVID (n=17)	p-value
hLOS (days, SD)	1.3 (1.8)	2.2 (1.8)	0.04*
Re-admission (yes, %)	0 (0)	1 (6)	0.40
Re-operation (yes, %)	0 (0)	1 (6)	0.40
SSI (yes, %)	1 (4)	0 (0)	1.00
Abscess formation (yes, %)	0 (0)	1 (4)	0.40

hLOS = Hospital Length of Stay. SD = Standard Deviation. SSI = Superficial Site Infection. * Statistically significant.

KEY TAKE-AWAYS

1. Pediatric patients with acute appendicitis during the Coronavirus 2019 Pandemic presented differently in the following ways: less frequently, delayed timing, and increased severity.
2. Despite these differences, there was no impact in postoperative outcomes.