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Brief Communication

Endoscopic Evaluation and Colon Cancer Screening During the COVID19 Pandemic -Experience from Community Practices

Lindsey L Trinh[1]*, Minh-Khang B Vinh[1], Dr. Abhishek Choudhary, MD[2], Dr. Brian S Levitt, MD[2], Dr. Geeta R Kutty, MD[2], Dr. Eugenie C Shieh, MD[2], Dr. Khanh K Nguyen, MD[2], Dr. Huy A Nguyen, MD[2], Dr. Treta G Purohit, MD[2]

[1]Silicon Valley Research Institute, San Jose, California, USA

[2]San Jose Gastroenterology, San Jose, California, USA

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Abstract

Colorectal cancer is the third leading cause of cancer-related death in the United States. Endoscopic screening has been widely used to minimize the rate of colorectal cancer cases and deaths. During the COVID-19 pandemic, it is essential to assess the risks and benefits of receiving endoscopy in regions with moderately high SARS-CoV-2 infection rates. This study considers the low SARS-CoV-2 infection rate along with the number of colorectal cancer cases diagnosed at a community endoscopy center, to suggest that the benefits of undergoing endoscopic evaluation may outweigh the risks of attending an endoscopy procedure during the COVID-19 pandemic.

Introduction

In the United States alone, there are projected to be 104,610 new cases of Colorectal Cancer (CRC) in the year 2020, with an incidence rate of 27.6 cases per 100,000 persons [1]. Age is a significant factor in the risk for colon cancer development: the incidence rate for CRC approximately doubles for each age group until age 50, then subsequently decreases between ages 50–59. This drop in incidence rate may be a result of the preventative screening protocols recommended by the CDC for individuals above 50 years old. Despite these reports, incidence rates have recently increased in younger age groups (< 50 years, 2.2% annual growth) and in those aged 50–64 years (1% annual growth)[1].

Similarly, the mortality rate due to CRC has been decreasing over the past three decades due to improved screening, changing risk factors, and better treatment options. However, recent trends have shown that rates of colorectal cancer-related mortality in certain age groups may be increasing. For those aged 50–64, the rate of decline has slowed from a 1% decrease annually to 0.6% annual decrease. For those older than 65, their mortality rate slowed from 3.3% annually to 2.6% annually [1].

The increased mortality rates due to CRC are compounded by the current COVID-19 pandemic which has resulted in patients choosing to delay or decline their physician appointments [2–4]. As a result, recent statistics show that standard cancer screening for CRC has dropped 84.5% (through May 2020), potentially leading to later cancer diagnoses and increased risk for CRC-related death. In fact, in a modeling study using data from the National Health Service, investigators estimated a 15.5%-16.6% increase in CRC deaths over the next several years [5].

Given these disturbing trends, our goal was to weigh the risk of contracting COVID-19 based on our practice quality assurance assessment with the benefits gained for patients at our community based Gastrointestinal (GI) clinics undergoing an endoscopy and/or colonoscopy at a community- based outpatient surgery center where routine rapid testing for SARS-CoV-2 was not accessible, especially earlier in the pandemic. Several precautions have been recommended by the CDC and ASGE for patients and healthcare workers in gastroenterology clinics. In addition to COVID-19 screening questionnaires for patients 72 hours before their procedure, the ASGE recommends room cleaning, proper PPE, and physical distancing by patients and staff. Patients should also be surveyed 1–2 weeks post-procedure to assess for any COVID-19 symptoms or positive test results. Should any patient or staff experience any COVID symptoms or test positive, contact tracing should be initiated [6]. It should be noted that precautionary testing for COVID-19 prior to GI endoscopy and colonoscopy procedures was not officially recommended by the ASGE at the time of this quality assurance assessment. In correspondence with ASGE guidelines, the community endoscopy center in this study utilized COVID-19 screening surveys before and after scheduled procedures, proper PPE, physical distancing among staff and patients, and proper room air exchange ventilation, preparation, and cleaning.

Methods

In this report, we reported results of our quality assurance data where patients were contacted approximately 30 days after their clinic visit for an endoscopy or colonoscopy procedure to determine if they had any symptoms of or a positive test for COVID-19. We utilized data already collected and analyzed for quality assurance assessment for our practice from a total of 1020 patients that underwent an upper GI endoscopy or colonoscopy procedure from January 2020- Dec 2020 at our clinics. We reported completely de-identified aggregate data of 5 patients or more to inform other community practices. No identifiable protected health information was accessed in the conduct of this report; therefore, institutional review board approval or waiver of approval was not required.

Results

As noted in Table 1, the average age of the cohort was 59 years old with an approximately equal number of males and females, with a majority of Vietnamese patients (53.6%). The three main reasons for undergoing procedures were for cancer screening (41.9%), a personal history of colon polyps (22.9%), and GI-related symptoms (23.6%). Of the 241 patients that received an endoscopy or colonoscopy due to symptoms such as abdominal pain and weight loss, four (1.66%) were diagnosed with colon and one with stomach cancer (0.41%). Eight patients (0.78%) were found to test positive for COVID-19 following their visit. Upon further review of the eight patients who tested positive for COVID-19, most (six) had known contact with people who were sick or later became sick with COVID-19 after their procedure. In addition, four of our staff members also tested positive for COVID-19 during this time period, but all were confirmed to be a result from at-home exposure to the virus.

Discussion

It is difficult to trace the positive COVID-19 results directly to the clinic, because in the period during which the patients tested positive, the county where our practice is located was experiencing an outbreak with a 3.1% (94,366/3 million) positivity rate [7]. Nonetheless, the 0.78% positivity rate at the clinic compared with the 3.1% positivity rate of the county; in addition to the 0.49% of patients found with cancer suggest that it is safe and advantageous for patients to undergo their scheduled endoscopy and colonoscopy procedures. While it could be beneficial to test patients for COVID-19 several days prior to their GI procedure, the results of this study suggest that a detailed pre-procedure COVID-19 questionnaire, in addition to the use of PPE, physical distancing, room cleaning, and adequate air exchange ventilation may be sufficient to minimize the risk of COVID-19 infection in both patients and healthcare workers in community endoscopy centers without the means to test each of their patients prior to procedure. Further studies will be required to validate our findings, but as the pandemic

continues, it is important to maintain CRC prevention measures which may provide reassurance for patients and staff that it is safe to undergo invasive prevention measures when CDC guidance is followed.

Table 1: Demographic Characteristics and Findings among 1020 Patients who Underwent Endoscopy Procedures Jan 2019- Dec 2020.

		Number patients	Percentage
Demographics	Men	503	49.3%
	Women	517	50.7%
	Average age	1020	59 years old
	Patients positive for COVID-19	8	0.78%
Race/Ethnicity	Vietnamese	547	53.6%
	White	196	19.2%
	Chinese	85	8.3%
	Hispanic	60	5.9%
	South Asian	48	4.7%
Pre-op	Screening	427	41.9%
	Personal History of Colon Polyps	234	22.9%
	Dyspepsia	110	10.8%
	Rectal Bleed	77	7.5%
	Abdominal Pain	73	7.2%
	Change in Bowel Habit	48	4.7%
Post-op	Normal (with/without hemorrhoids)	220	21.6%
	Polyps	509	49.9%
	Gastritis	199	19.5%
	Diverticulosis	195	19.1%
	Cancer (stomach, colon)	5	0.49%

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***Corresponding author:** Lindsey L. Trinh, BA, Scripps College, Claremont, California, USA;

Email: lindseytrinh10@gmail.com